

## CYCLE

BSA 250 VICTOR TEST

SPRINGFIELD MILE

KAWASAKI A1SS TEST

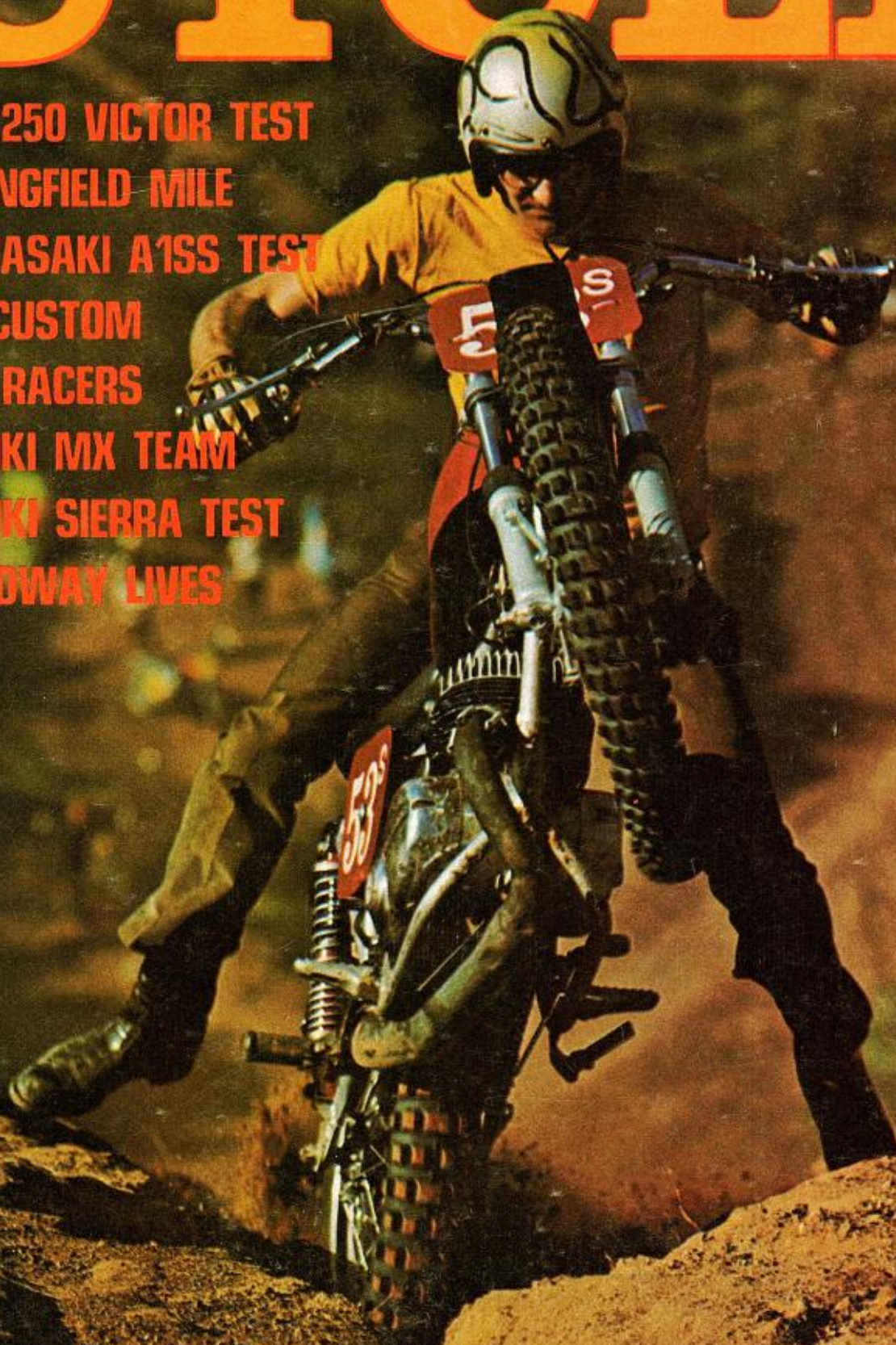
H-D CUSTOM

GIRL RACERS

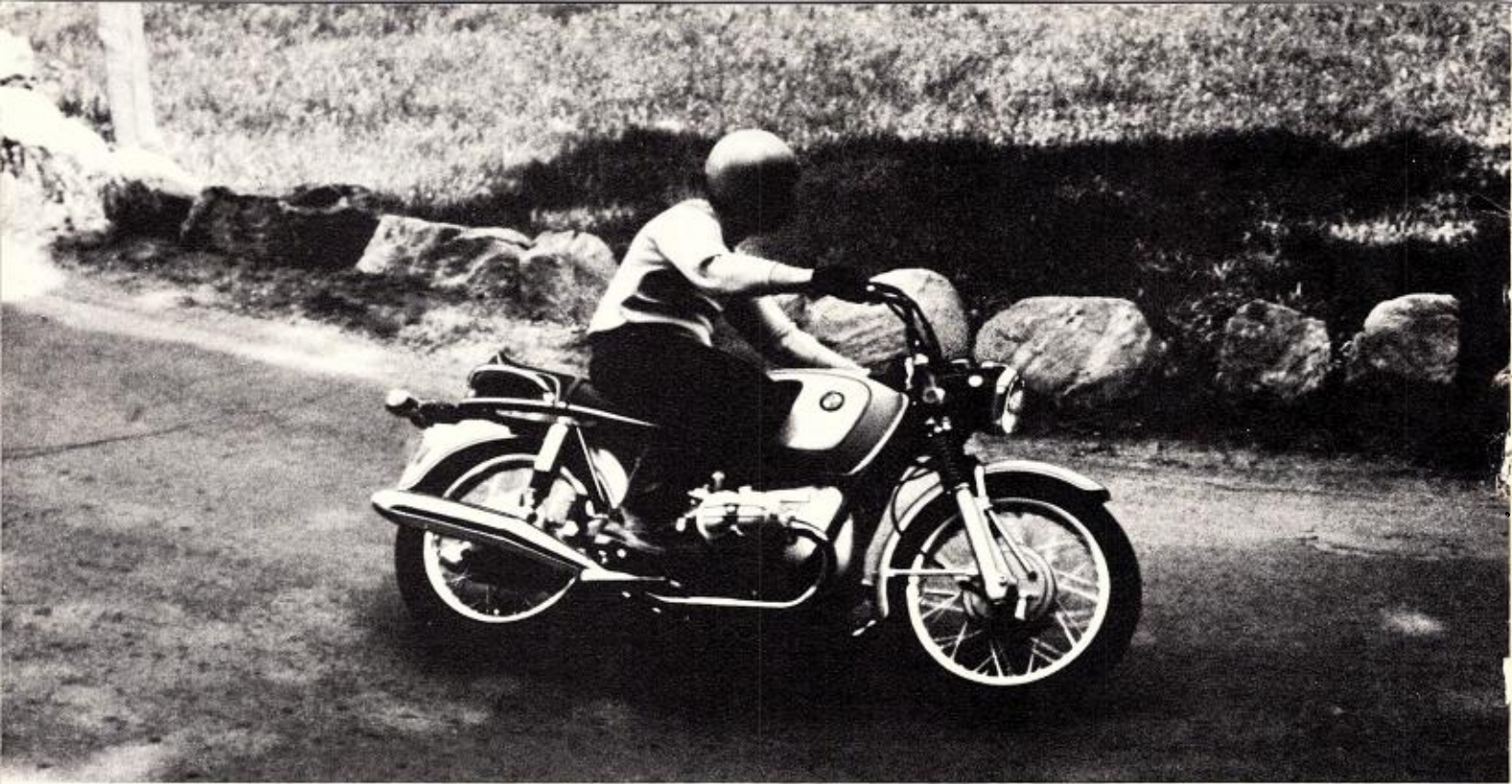
SUZUKI MX TEAM

SUZUKI SIERRA TEST

SPEEDWAY LIVES







# We are about to explode a myth.



Millions of knowledgeable riders willingly concede that BMW is the best motorcycle in the world.

Only trouble, some who have never ridden a BMW still think you can't corner with it.

Well, gentlemen, that is a myth. It's just simply not so. Ask anyone who's ever ridden the new BMW.

Take Cycle Magazine. They say "BMW corners superbly." Or Cycle Illustrated. They say "You have to get this bike more than 45° from vertical before the cylinder heads ground. At speed it won't happen."

Our new 500, 600, 750 cc BMW's are powered by a re-designed version of our famed horizontal twin-cylinder engine. The best arrangement ever devised to power a motorcycle. Cool. Vibration-free. Balanced. Strong.

If you want the smoothest, quietest, best-built bike in the world, and one that really corners — test-ride a new BMW.

You won't just explode a myth. You'll blow your mind.

See your nearest authorized BMW dealer, or write: East: Butler & Smith, Inc., Norwood, N. J. 07648. West: Flanders Company, Pasadena, Calif. 91101. Canada: BMW Motorcycle Distributors, Willowdale, Ont.

**BMW**  
**Bavarian Motor Works**  
in Munich, city of the 1972 Olympics.





# MODERN CYCLE

VOL. 7, NO. 8

AUGUST 1971

A Blast From The Publisher .....	4
European Racing Game .....	6
Letters From The Troops .....	10
Team Hare & Hound .....	12
Kawasaki A1SS Test .....	15
Suzuki "Duster" Hop-Up .....	22
End Does Motorcycle Club .....	26
Matterhorn Hillclimb .....	28
Tips From The Troops .....	34
BSA 250 Trail Test .....	35
Up On The Pegs .....	42
Springfield Half Mile .....	43
Harley-Davidson Custom .....	51
The Suzuki Moto Cross Team .....	54
Nuts & Bolts .....	58
Tool Guide: Part II .....	59
Suzuki 185 "Sierra" Test .....	63
Racing In Australia .....	69
Speedway Lives! .....	72
Miss Modern Cycle .....	75
Variable Expansion Chamber .....	76
Action Photo Contest .....	79
New Products .....	80

Kenneth H. Doe	● Publisher
Edwin A. Schnepf	● Associate Publisher
Gordon Karrel	● Editor
Bill Hayes	● Managing Editor
Sandi Roth	● Editorial Assistant
Ron Harper	● Art Director
Robert Lee	● Advertising Sales
Jerry Stanfield	● Circulation Manager
Diana Noble	● Reader Service



**CONTRIBUTORS:** John Boykin ● Dave Ekins ● John Grout ● George Hays ● Mike Hodgins  
 Roger Hull ● Yukio Kurado ● John Larson ● Maureen Lee ● Gary Tomei

MODERN CYCLE MAGAZINE is published monthly by MODERN CYCLE PUBLISHING, INC., 7950 Deering Avenue, Canoga Park, California 91304. Telephone (213) 887-0550. Copyright 1971 by MODERN CYCLE PUBLISHING, INC. All rights reserved on entire contents; nothing may be reprinted, in whole or in part, without written permission of the publisher. Not responsible for unsolicited material. Manuscripts, photographs and drawings not returned unless accompanied by a stamped, self-addressed envelope. Single copies 75¢. Subscriptions \$7.50 for 12 issues (one year), \$14.00 for 24 issues (two years). Printed in U.S.A. Second class postage paid at Canoga Park, California and at Sparta, Illinois.





## A BLAST FROM THE PUBLISHER

### ISDT QUALIFICATIONS

The FIM sanctioned International Six Days Trial is the world's most prestigious motorcycling event. All major countries enter teams in this serious competition that holds major political importance throughout Europe. This year's ISDT will be hosted by England's FIM affiliate, the Auto-Cycle Union. It will be run on the Isle of Man, September 20 through the 25.

As the United States affiliate to the FIM, it is the responsibility of the American Motorcycle Association to organize and support this country's effort. To prepare for this effort, a United States Trial series has been organized by the AMA Department of Amateur Activities. The series is intended to physically prepare American riders for the varied and grueling terrain of the Isle of Man. In addition, it will provide a qualification method by which the six men who ride on the important United States Trophy Team will be chosen.

The AMA, with help from the motorcycle industry, hopes to totally fund this Trophy Team effort. Depending upon the success of the National Trophy Team program, attention will be given next to the foreman Vase A and Vase B teams. In addition, the ACU will accept three man Manufacturer Teams and Club teams from the United States, and the AMA will support these efforts to every extent possible.

For the actual U.S. qualification trials series, events will be held in six different areas of the country. Two and three day trials have been organized in Ohio by the Alexander Competition Club and in Oregon by the Motorcycle Activities Club.

Additional events are being considered in Missouri, Wisconsin, New Jersey and California. Throughout the ranks of the AMA, voluntary support efforts already have been mounted. For example, the Midwest National Enduro Riders Association have donated \$.50 from each entry in their 150 mile National Championship Enduro which was held in Shelby, Indiana early this past May. Questions concerning support of the U.S. effort should be addressed to the attention of Mike Vancil, AMA Director of Amateur Activities, 5655 North "I" Street, Worthington, Ohio 43085.



### MODEL CONTEST

In cooperation with Kawasaki Motors Corporation and Bell Helmet Company, Revell, Incorporated has established the first, official, nationwide model building competition exclusively for motorcycle models. Scheduled to begin in July, the contest is open to any 1/8 scale motorcycle model built from an existing kit. Featured are prizes worth over \$7,500, including 11 Kawasaki Motorcycles and 35 Bell Motorcycle Helmets.

The contest, open to anyone in the U.S.A. and Canada, is entered by building the motorcycle model, then sending Revell 1 to 4 photos of it. From these, the team of cycling and modeling experts will choose finalists, who will then be requested to send in their models to determine the ultimate winner.

Parnelli Jones, shown here with one of the contest prizes, a Kawasaki MT-1

Mini Trail Bike, will serve as one of the judges in the contest.

The prize list, totally over 350 items in all, is topped by the fantastic Kawasaki Mach III, the 3-cylinder 500cc machine that was voted "Bike Of The Year" by motorcycle owners last year. This, and the Judges' Trophy, will go to the person entering the best bike model overall. All entrants are eligible for this Grand Prize. All entrants are also eligible for the Special Category Prize, a Kawasaki MB-1 Mini Bike which will be awarded for best photo on a model submitted.

To insure eligibility of all types and styles of bikes, the contest will be separated into three basic classes. Within each of these classes, a separate First Prize will be awarded both to entrants 14 years and older, and to entrants 13 years of age and younger. "Younger builders often feel overwhelmed by older and more experienced modelers. With this separate First Prize award, we hope a lot of the younger modelers will feel they have more of a chance when they enter," said a Revell spokesman.

Street/Custom Class A will include stock, custom and modified street machines, both two and three wheelers. Off-Road Class B encompasses stock and competitive off-road bikes, scramblers, dirt racers, desert bikes and moto cross machines. Finally, Racing Class C applies to all drag racers, road racers, TT machines, flat trackers, Bonneville and land speed record bikes, or any bike raced over a pre-determined course.

More than one model may be entered, BUT, each entry must be enclosed in a separate envelope.

The contest remains open till January 31, 1972, and all entries must be submitted with an entry form which can be obtained at any model shop. Or, entry forms can be obtained by writing to Revell, Incorporated, 4223 Glencoe Avenue, Venice, California 90291.

### IN THIS ISSUE

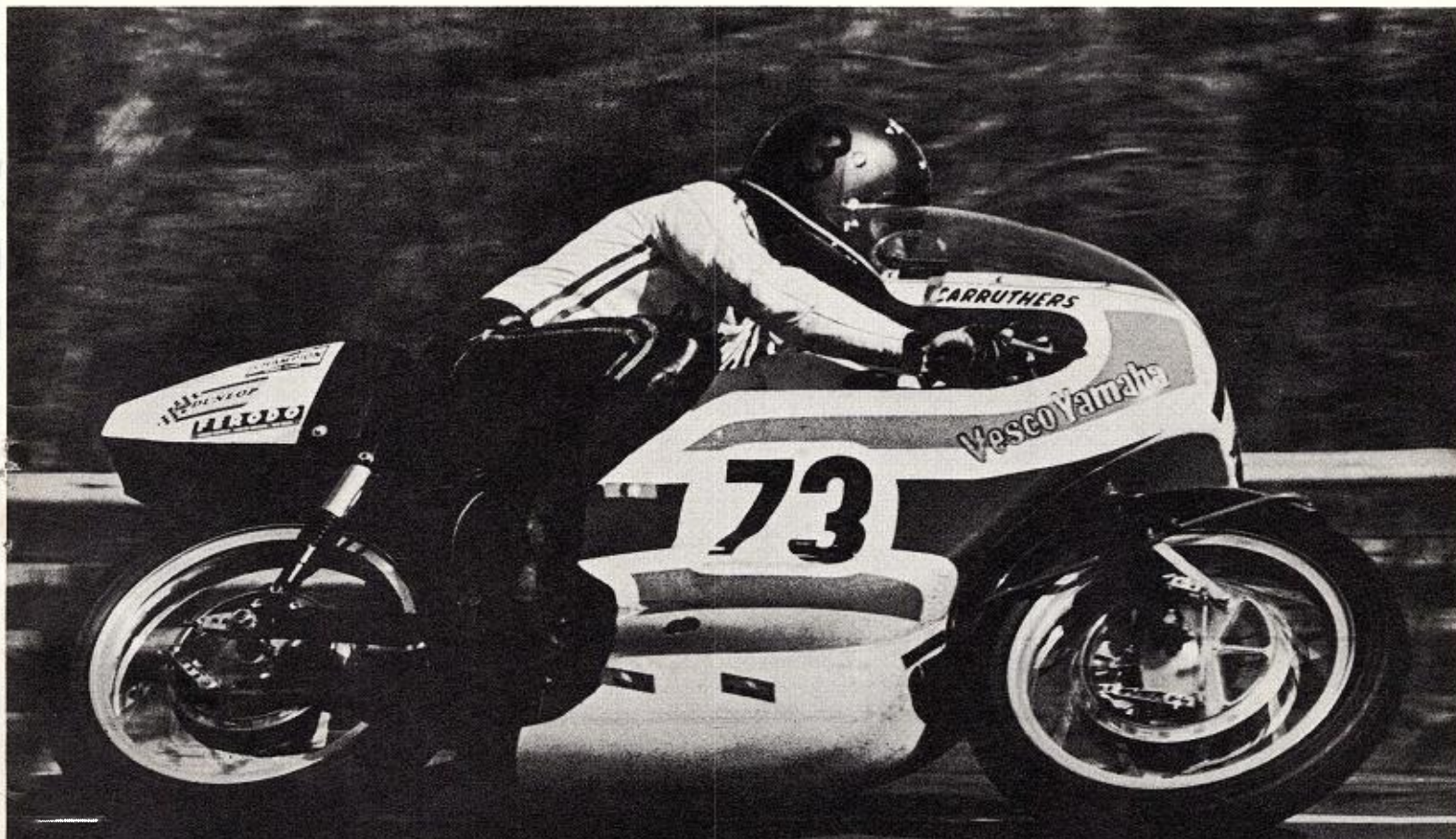
A wide variety of competition is covered in this issue of Modern Cycle. You'll find a report on the status of speedway racing in Southern California, an account of a "Team" Hare & Hound held in Utah, and, all the way from

(Text continued on page 14)



Carruthers and Roberts  
bring it all home for Yamaha.

# ROAD ATLANTA



ATLANTA, GA., April 24-25, 1971

Giving away 400cc to the rest of the field, Kel Carruthers (above), powered his little 350cc Don Vesco-tuned Yamaha to victory in the 125-Mile AMA National at Road Atlanta. It was Yamaha's first AMA National road-race win (Kel's Yamaha is the smallest machine

ever to beat the big 4-strokes). For Kel, it was his second kiss from Miss Road Atlanta. Because, on Saturday, he won the 250cc combined Junior/Expert 50-Miler. (Yamaha took 9 out of the first 10 places.)

And that's not all. Last year's top AMA Novice, Kenny Roberts,

brought home still another victory. Riding his A&A-tuned 250cc Yamaha, he placed first in the 50-mile combined Junior/Novice Lightweight race (all of the first 10 places went to Yamaha).

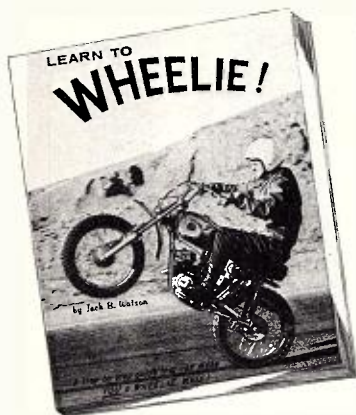
Indeed, a great weekend for Kel, Kenny, and the "better machine."



Yamaha International Corporation  
P. O. Box 6600, Buena Park, California 90620

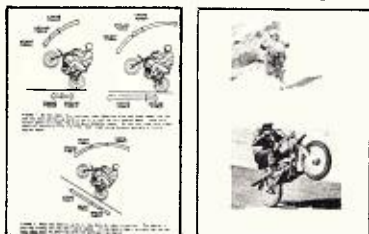
# YAMAHA



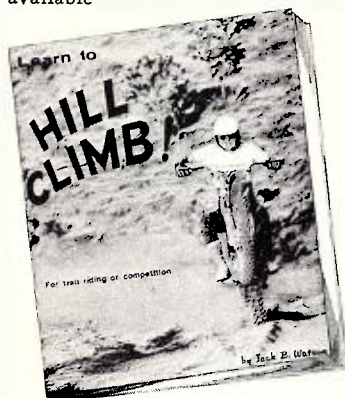


Wheelie 100 yards, 500 yards or 1000 yards! The book you've been waiting for. A step by step home instruction course that can make the average rider a WHEELIE WHIZ! It's all in the technique NOT engine power. You can learn to wheelie any bike from 50cc to 650cc for as long and as far as you want!

Many pages of photographs and diagrams



Also available



A chapter on every important topic:

- \* The proper riding stance
- \* What to do when the front end wheelies up
- \* What to do when the engine bogs down
- \* The use of body english
- \* How to ride down a steep impossible hill
- \* How to turn around in the middle of a hill
- \* Modifying your bike for hill climbing
- \* Special tips for the trail riders

BARNARD PUBLICATIONS DEPT. F-1  
BOX 158 SAUGUS, CALIF. 91350

- ☐ I am enclosing \$3.49 for one copy of LEARN TO WHEELIE
- ☐ I am enclosing \$3.49 for one copy of LEARN TO HILL CLIMB
- ☐ I am enclosing \$5.98 for both books

California residents add 18¢ sales tax.  
Allow 3 to 4 weeks delivery or add 50¢ extra for 1st class mail.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

ZIP \_\_\_\_\_



With the Spring and the opening of the moto cross season proper, it seemed strange to see the introduction of a new trials model. This—the Montesa Mark 4 has undergone some considerable engine modifications and the first reports from riders indicate that these are not for the better in relation to the job of work intended. One has the feeling that some of the low down bottom torque has been lost and that porting alteration and a lighter flywheel has given a Bultaco Sherpa zip at the bottom end. This will be—if born out by users—affect demand and the terrific demand during 1970 when in England at least there was always waiting lists for the Cota Mark 3 could soon fade away. Alteration to the silencer system has produced another noisy trials bike whereas the previous Cotas 1, 2 & 3 were noted for their muted exhaust note. When every effort is being made by those with the interest of the sport at heart it is surely a retrograde step to alter an exhaust system which was acceptable. One improvement is the paint job on the frame which is now a silver finish—easily touched up. Awaited is the new Ossa which those who have tried out the prototype declare as even better than the other two Spanish makes—Bultaco and Montesa.

Ossa has now relented and given permission for their number one trials rider, Mick Andrews, to ride a Cheney Triumph in the International Six Days Trial in September which is being held on the Isle of Man and organized by the British Auto Cycle Union. Ossa had little choice but to agree as Andrews would not have been allowed by the British governing body to ride the Ossa. Dunlop are to produce special tires for the team members in the I.S.D.T. and the Cheney Triumphs as used last year will use M.P. front forks in an attempt to eradicate the fork leakages experienced by all the Cheney Triumph teamsters.

B.S.A. & Triumph—with their Daytona success—are not to go unchallenged in the 750cc class racing as the Norvil special racing group of Norton Villiers are backing project engineer Peter Williams and his new low framed Commando. From the same Norvil stable comes the 250cc and 410cc Championship G.P. specials for moto cross under the A.J.S. banner. In the hands of one of the top amateur English riders the 250 A.J.S. special has to date recorded 15 moto cross wins from 15 starts and the opposition includes some very fast men on Huskies and Greeves.

Although out of production for three years, one of the most popular trials and Enduro mounts—the Greeves Anglian—is being resurrected by the factory to provide a three man British army team in the Scottish Six Days Trial. Only the lack of supplies of Villiers engines, on to which were grafted the Greeves alloy top half, caused the demise of this model—hundreds of which are still in use all over the world. It is said that the still considerable sales of Villiers spares are mainly for this one model.

The news that moto cross expert Bob Grossi is to race in Europe in company of Barry Higgins and Bryan Kenney to mind Grossi's previous visit in 1969 to Europe when he gained considerable experience as on his return to the U.S. he quickly gained top honors.

Torsten Hallman made his moto cross Yamaha debut in Austria and although gaining first place in overall classification he was disqualified for course cutting. But the performance of the Yamaha was impressive and Hallman satisfied with development progress.

Vic Allan—B.S.A.'s new 1971 moto cross signing had already shown that he did not intend to play second fiddle to the factory's number one John Banks and with no factory orders to play it cool—Allan had put himself at the head of the six-man B.S.A. team. It was bad luck that so early in the 1971 international circus in the Italian G.P. he crashed heavily and sustained a broken thigh which will put him out of action for several months.

Joel Roberts continues where he left off in 1970 as in the 250 Spanish round he and teammate Olle Petterson took first and second whilst Italy Suzuki's Roger de Coster took both legs to overall victory.

Some consternation was expressed when the works B.S.A. moto cross bikes were revealed as battery operated ignition—this had not been generally known until Bank's and Robertson's retirements when in leading places was due to faulty batteries. B.S.A. explained that only two of their riders were using this form of ignition power as an experiment.

After Daytona came the Easter U.S. versus British match race series which after three days of close and thrilling racing resulted in the home team winning by the large margin of 183 to 137 points. Summarizing the results afterwards the sporting press made no claim to a British rider supremacy and pointed out the short experience on short circuits of the American boys and that whilst the home riders were mainly equipped with current 1971 machines as was Dick Mann—the visitors had the heavier and higher older machinery. This was not due to any bias in favor of the home team but lack of enough up to date racing B.S.A. and Triumph 3's. Pressure on both works to supply the huge demand for the 3's puts severe pressure on the racing departments.

The promoters of the Easter match races were well satisfied with the crowd pulling power of the U.S. riders and want them to return. Hopes of getting top Americans to the September Race of the Year are slim as the date clashes with the top prize money meeting at Sacramento. As both countries have important national cham-



pionships to contend with, any inter-country match racing has to be dated before or after the home meets.

Husqvarna have produced three works 250 specials and chosen riders for these are Heikki Mikkola, Torlief Hansen and Bryan Wade. The latter has been the biggest threat to the six-man B.S.A. works team in the 500 class and leads the British 250cc championships—so Husqvarna have made a wise choice. These 6 speeders have alloy frames and Motoplat transistor ignition. The power band widely ranges from 3,500 to 8,500 with maximum 30 b.h.p. at 7,200 revs. The alloy frame took a severe beating in its first serious outing with the head stock splitting, so the claimed 30 per cent weight saving could be at some reliability expense. In the big class they are turning out six 400cc works specials as prototypes for 1972 production sellers. The limit in c.c. will be reached with the experimental full 500 Greeves to be raced by works man Arthur Browning who enters for the first time the Scottish Six Days Trial on his own Greeves Pathfinder.

The Maico factory which had such success in the 1970 Inter Am series has not endeared itself to British riders and dealers. Having some years ago appointed one importer who built up big spares stocks and laid out much gold in promoting had a rival importer to contend with in quite a small market. After Bryan Goss on a Husqvarna won the British 500 championship it was assumed that Husqvarna would want Goss in their stable for 1971, but Husky management have no liking for the man Goss who did a deal with Maico. In return for placing his undoubted riding ability on a Maico he asked and obtained the Maico concession for the whole country. So until Goss proves he can win on the Maico and the spares position for older models is resolved, new bike sales will remain on a modest scale. Goss soon discovered that the big 400 Maico does not handle like the big Husky.

Yet another Italian racer seeking to break the M.V. domination was seen at the early Italian race meetings. A 500 c.c wide angles V twin Ducati was raced by Bruno Spaggiari. Not the most beautiful of bikes the single camshafts are shaft and bevel driven. Surprisingly the well known Ducati desmodromic valve gear operation is not used as no appreciable power improvement was noted. Later developments may include four valves per head and twin camshafts. Also another rider of renown, Phil Read, may team up with Spaggiari.

With the ever rising costs of machines, be they street, track, trials or moto cross, one enterprising British dealer who has gone to the biggest producing country of all—Russia—for his low price imports. Five models are being imported ranging from a 50 c.c. moped through 125 c.c., 175 c.c., 350c.c., and 650 c.c., the latter a poor copy of the B.M.W. but nonetheless a copy. Two million of these are being produced and a thousand each of the 50 c.c. and others in the range are planned for 1971. No user information is yet available on performance but the prices when it is considered that import duty and British Sales Tax is included in the cost. The 347 c.c. Jupiter

(Please turn page)

Look for these tires in the winner's circle! ☐ Avon G.P.

Grand Prix. Track tested for expert 130 mph racing.

☐ Avon Track Racer. The only tire of its kind specially designed for dirt track racing. AMA approved. Race it front or rear. ☐ Avon Racing Slick. The only completely new tire (not a retread) developed exclusively for the unique demands of cycle drag racing. ☐ So get ready for the checkered flag! Make

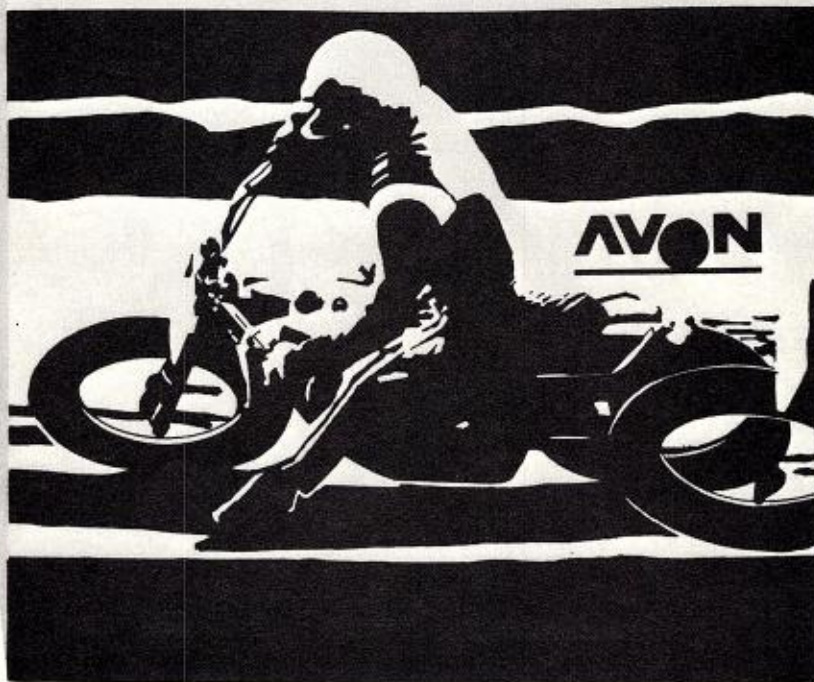
your next pit stop a switch to Avons.

Sold at all leading cycle shops.

And we'll see you in the winner's circle.



**If competition  
is your bag—  
Avon is your tire.**





## EUROPEAN RACING GAME

# WHY IS THE 1971 CUSTOM Triumph SUNSET TRIPPER

NUMERO UNO ???? ?

ASK THE NUMBER ONE RIDER — THE NUMBER ONE COP OR THE  
NUMBER ONE DESIGNERS AT THE NUMBER ONE SHOP !!!!



**LOOK !!!  
OVER**

**1000  
NEW**

**COMBINATIONS  
TO CHOOSE FROM !**

**1000**

For Order Blank and More  
Information About This  
Race-Tuned Custom, Mail

**\$100**

**FOR  
CATALOG  
TO**

"SUNSET TRIPPER"  
c/o Triumph of Burbank  
1329 N. Hollywood Way  
Beautiful Downtown Burbank,  
California 91505

**PLUS BOLT  
ON**

**GOODIES**

sells at 480 dollars and the 650 Ural at approximately 790 dollars. From the claimed b.h.p. figures it is evident that they are designed for humble speeds and the use of low grade fuel. Plans are mooted for an updated 750.

The aftermath of B.S.A.'s Vic Allan crash in the recent Italian moto cross is this firm's announcement that they will boycott any event using the Cingoli course which resulted in a crop of high speed accidents and considered to be a dangerous course and not a real test of rider or machine ability.

Husqvarna and Montesa have announced that they will not officially support the International Six Days Trial in September—the first named due to heavy commitments in moto cross and Montesa for reasons not given but it is certain that the Spanish factory's top men such as Gordon Farley will ride "private."

Not generally known is the fact that the origin and still majority production of the sporting Greeves factory is a three wheeled invalid carriage powered till now by the 11E 250 c.c. Villiers unit made for the Ministry of Pensions which allocates these on loan to disabled adults. Greeves or to give its parents title, Invacar, began its existence for the production of these invalid carriages. These are not peas in a pod mass productions as due to the varied infirmities of users controls must be varied as between those with a missing or useless arm or similar leg misfortune. With a view to updating—the Ministry lays down the production program—has been seeking a smoother power unit and in the absence of home produced engines went to the Puch Austrian factory. This firm of course is the source of supply for the Greeves Pathfinder engine. It is a fact that apart from specialist items such as gears, chains, tires, Greeves makes in its own factory a greater proportion of the finished product than any other competing firm. The Griffon engine and gearbox castings—frame, glass fiber tanks and side panels and the invalid all-glass fiber body is made in the factory.

After a two year lay-off the Russians are contesting the 250 c.c. world championship series and seeking faster machinery approached Suzuki only to be told that no machines were available—so the Russians fell back to C.Z. and with some success as their rider Kavinov finished third overall in Switzerland and the same placing after two rounds of the series. It was known that when the Russians previously used the C.Z. the more exotic machines were reserved for the top non communist countries—the view or need being the incoming currencies from these. When championship events are held in the Eastern bloc countries it is unlikely that winners travel home with any actual currency—a popular prize is the well known quality cut glass ornaments from Czechoslovakia—the home of the C.Z. and Jawa.

Eric Cheney of special frame fame tells us that following the success of his frame kit used in the racing Aermacchi there is an order in the offing for 200 frame kits from Harley Davidson.



# A plug for people who change their own

We figure you power buffs have lots of interests and lots of equipment to go with them. So NGK builds a plug for practically every internal combustion engine made.

Also, being mechanically hip, you appreciate quality and efficiency. So we build the most efficient, toughest plug we can. The kind you'd want to put in your own car, bike, outboard, buggy...whatever.

But all our plugs—and it takes the company computer to keep track of them—have one thing in common: a never-say-die “Heart of Copper”.

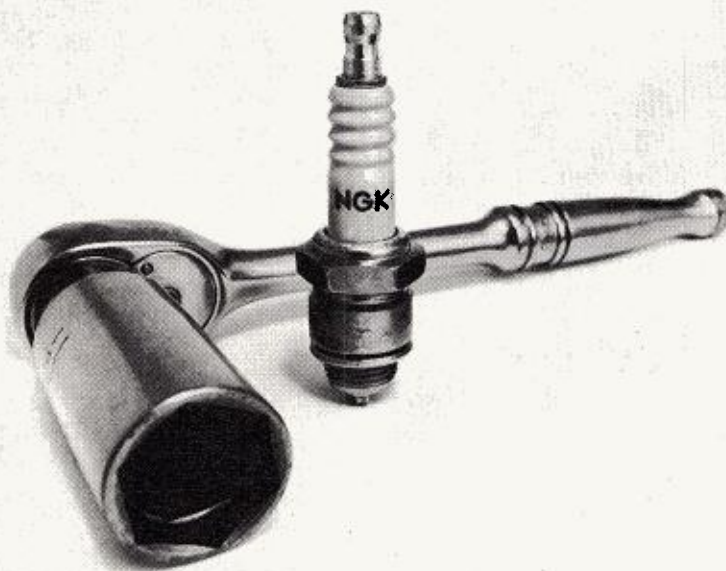
Used in place of ordinary iron cores, this highly conductive copper core delivers maximum performance under all conditions.

It dissipates heat fast, cuts down plug damaging hot spots and piston-popping pre-ignition. A long-nosed insulator holds just the right amount of heat to reduce tip fouling. In hot engines or cold, under easy or hard use, NGK's fire on time, every time.

If you're a motorcycle owner, you probably know all about NGK performance. You sports car types do, too. But NGK's work just as great in utility and recreational vehicles. And they'll fire-up your hairy V-8 as quick as your one-lunger saw.

Take our tip. Screw in a set of “Heart of Copper” NGK's. They're a change for the better.

NGK, the long life, hi-performance plug.





## THE NEW FOURWAY HEAVY-DUTY COMPLETE PROFESSIONAL ARC WELDER SET

Just \$24.95 includes welder in heavy-duty metal cabinet, mask, cables, ground clamp, combination carbon arc torch & rod holder, welding instruction manual . . . and \$4.95 foot pedal control at no additional cost plus leather palmed welder's gloves.

### WELD, BRAZE, SOLDER, CUT NEARLY ANY METAL INCLUDING ALUMINUM.

You can pay more—pay less—you won't find an arc welder value better than this—more complete than this. Simple instructions to make or repair countless items including furniture, toys, auto bodies, fenders, trailers, boats, farm equipment, tools. Operates on 110 v. 30A for pennies. You can REGULATE HEAT FOR EACH JOB through our Adjustable Twin Carbon Arc Torch—eliminates changing cables. Produces 11,000 degrees heat without gas torches; with no tanks to buy or refill.

### LIFETIME GUARANTEE

Simply return prepaid for any defect—we repair and reship absolutely free.

Order Today on Money-back trial. Send only \$3.00 and pay \$21.95 C.O.D. plus delivery and C.O.D. charges or send \$24.95 for post-paid shipment anywhere in Continental U.S.A. If not completely satisfied return in 10 days and we refund complete purchase price.



FOURWAY WELDER COMPANY  
1810 S. Federal St., Dept. MC-871  
Chicago, Ill. 60616

RUSH ME MY FOURWAY COMPLETE  
ARC-WELDER SET

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

- ☐ Enclosed is \$3.00, I will pay \$21.95 plus C.O.D. and delivery charges upon receipt.  
☐ Enclosed is \$24.95; ship my Fourway post-paid. Illinois residents add 5% sales tax.



## LETTERS FROM THE TROOPS

Gentlemen,

I have a copy of April '71 Modern Cycle. In "Letters," on page 82, you mention an article "Buying a Bike" as appearing elsewhere in the issue.

I can't find the article in my issue. Could you send me a reprint?

Thank you,  
James A. Wrynn  
Woodcliff Lake, N.J.

*Forgive the goof on our part. Due to a last minute change in scheduling, the article "Buying A Bike" was dropped from the April issue. It did, however, appear in the following month's edition of Modern Cycle Magazine. —Ed.*

Dear Sirs,

I have never written to a cycle magazine before, but here goes.

I have followed your magazine for the last three issues, (March, April, and May) and I believe it to be one of the best. In the past I have compared it to Cycle Guide, Cycle World, and Cycle, they are all good magazines. However, they lack one thing that your magazine seems to be full of each issue. That is Project bikes. Your project bikes are out of sight. And now a question. How about your next project bike? Let's (you and your staff) make a MX bike out of a SL100 Honda. As I am trying to do this myself, I could sure use the help of a good article on this subject.

Keep up the good work, you really have a good magazine.

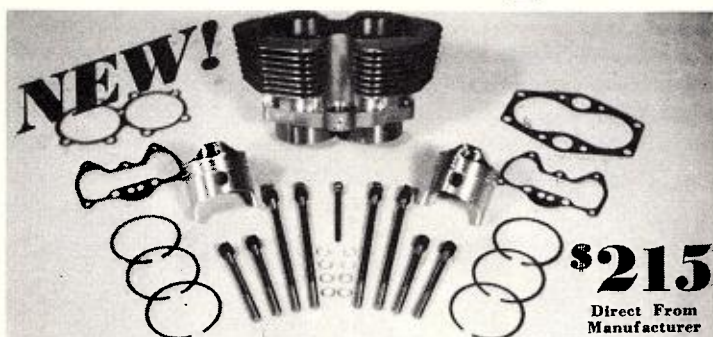
Yours truly,  
Dennis C. Harris  
Hugoton, Ks.

*Hey, thanks for the kind words. We get as much pleasure out of building the Project Bike as our readers do reading about them. Your suggestion about the SL-100 Honda is interesting. If we can put the package together you'll be reading about it in upcoming issues of Modern Cycle. —Ed.*

(Text continued on page 48)

## 750cc Triumph Kit

For Street or Strip



**NO OTHER KIT CAN COMPARE!**

ALL 650cc TRIUMPH OWNERS . . . UPDATE YOUR BIKE TO A HIGHER HORSEPOWER TO WEIGHT RATIO THAN THE NEWEST SUPER BIKES • Fast easy bolt-on installation • NO MACHINING REQUIRED • All necessary parts furnished • Highest quality materials • No faulty machining or broken castings like other kits • Tempered 356-T6 aircraft ALUMINUM ALLOY casting is 7 lbs. lighter, yet stronger than cast iron kits • Fins match cylinder head, dissipates heat twice as fast • Box shaped inner body eliminates distortion • Roll extruded threads, can't strip • Replaceable precision ground chrome-nickel alloy sleeves • 10.5 to 1 (Racing) or 9.5 to 1 pistons with P.C. rings • All American made, fully guaranteed (coming soon, 900cc kits) Now Available BSA A65 750 Kits \$189.00

World's quickest 9.02, and fastest 170.13 MPH—Boris Murray's twin engine Triumph with this kit. SEND FOR FREE INFORMATION.

**CHANILAND**

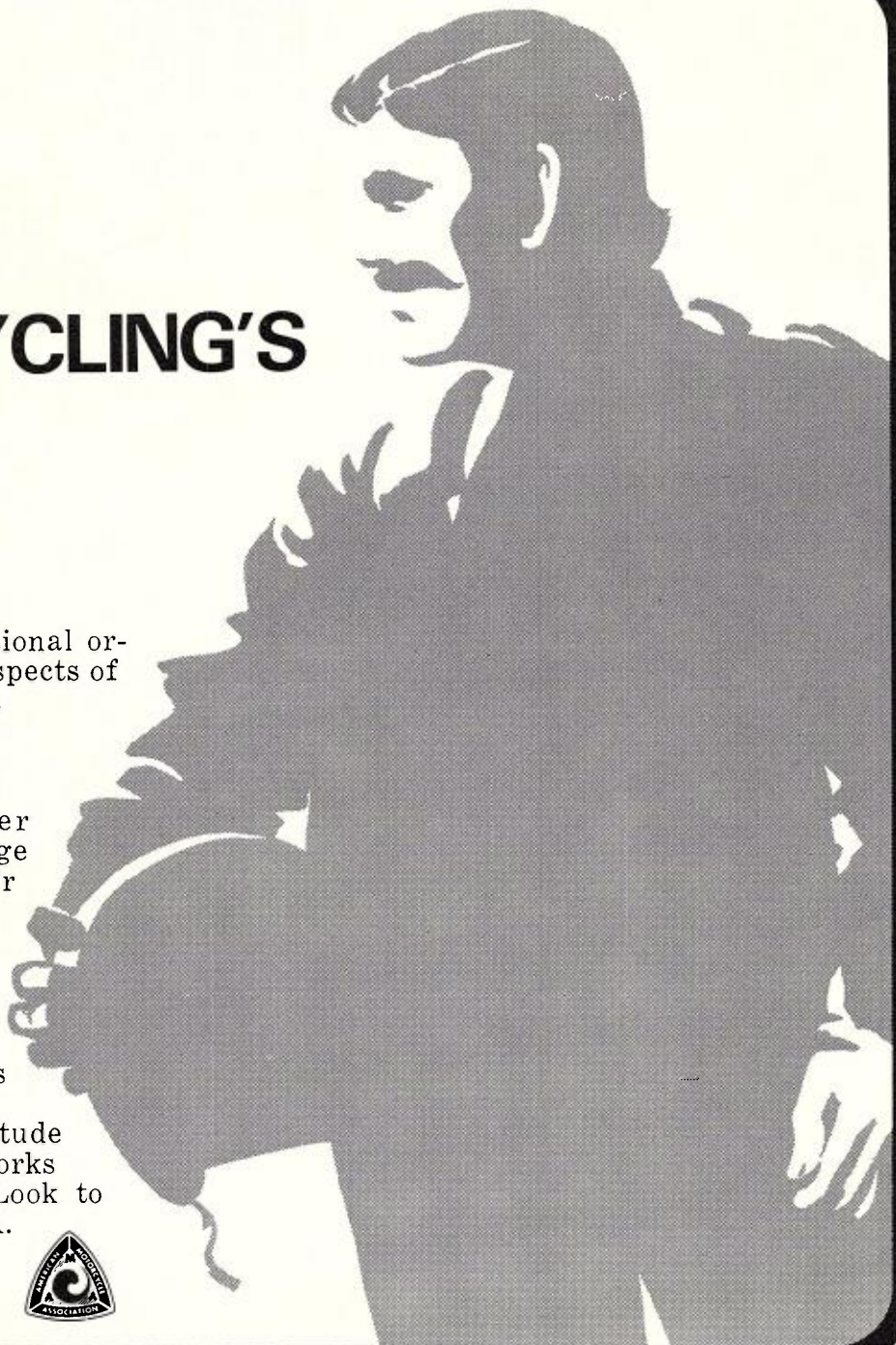
Bob Chantland  
242 Northdale Blvd.  
Coon Rapids, Minn. 55433  
Phone (612) 757-2584



# LOOK TO MOTORCYCLING'S FUTURE

The AMA is. It is a national organization promoting all aspects of motorcycling. Its members include the world's best professional racers, outstanding amateur enduro and trials riders, and over a hundred thousand average motorcyclists who use their bikes for fun and transportation.

It is working for motorcycle education and safety, it is combatting unfair legislation, and it is constantly attempting to improve the public's attitude toward motorcycling. It works through people like you. Look to the future with the AMA.



FOR FURTHER INFORMATION ON THE AMA  
CLIP AND SEND TO:

**AMERICAN MOTORCYCLE ASSOCIATION**  
P.O. Box 231, Worthington, Ohio 43085

*Please send information on the American Motorcycle Association to:*

NAME \_\_\_\_\_  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_  
ZIP \_\_\_\_\_

(Clip and send Today!)

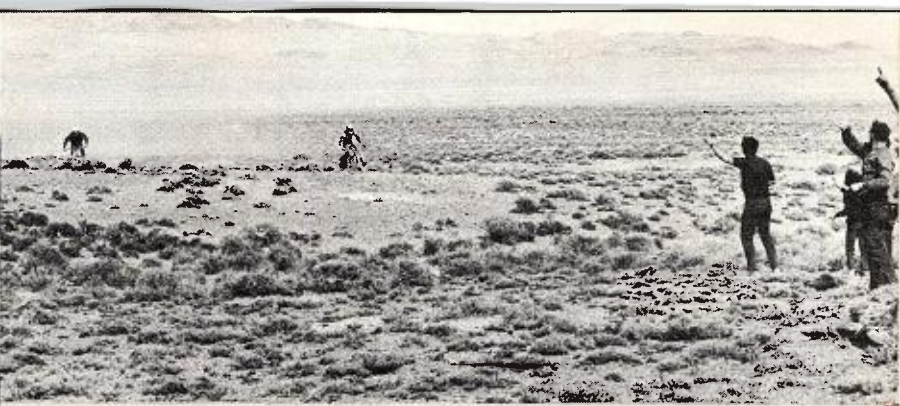
**AMERICAN MOTORCYCLE ASSOCIATION**  
P.O. Box 231, Worthington, Ohio 43085

I hereby make application for membership in the American Motorcycle Association. If accepted, I agree to comply with AMA Rules and Regulations for AMA Motorcycle Activities.

- ☐ \$10 Membership and AMA NEWS (13 Issues)  
☐ \$7 AMA Membership Only  
☐ \$3 AMA NEWS Only (12 Issues)

NAME \_\_\_\_\_ FIRST \_\_\_\_\_ MIDDLE INITIAL \_\_\_\_\_ LAST \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
AMOUNT ENCLOSED \$ \_\_\_\_\_







Cris Draayer could hardly believe what he saw when the head was pulled from the OSSA. The upper end of the engine was completely shot. The bike had lost its air filter on the first lap of the 80 mile course and had swallowed pounds of dust which had ground the rings down to the size of small pieces of wire. What was more remarkable still was that this was the engine of the winning team's machine.

This venial fact tells you a whole bunch about the First Annual Wendover Team Cross-Country race. The bash was held fifteen miles west of the Utah-Nevada border and by the time the flag fell, more than a thousand people and 213 riders had assembled for the rugged Hare and Hound. The riders made up 71 teams that soon dove into the Nevada dust, seeking gold and finding grime instead.

The question that may cross your mind is 'How could a machine with an engine worn into oblivion win such a race?' The answer lies in the fact that the competitors in this race were formed up into three man teams, one of whom had to be riding a 125cc or smaller machine. (All three could be 125s). To add to the interest was the rule that all three members of each team had to go through the check points at the same time. This meant that no man was faster than the slowest machine of the team. The sum total of these regulations was that it took good consistent steady riding and some good luck in order for a team to win. Any of you that have ridden cross-country events before know that if they are conducted on the 'fastest single man wins' basis, the winner is sometimes the man who took fantastic chances and somehow lucked out. When this sort of a rider can have the good fortune to break neither his bike or his body, he will win. When it comes to the team event, the odds of three of these type riders surviving are remote indeed, and it equalizes out the chances of winning.

As it were, the winning team had their share of trouble. They picked up a broken

shift lever at the first check point which caused a lengthy pit stop. They were plagued with bogging down in gulleys or other fights with the elements, as all the while Woody Lawhon's OSSA was loosing power. Trouble was a thing that everyone shared as the first lap leaders, Crosby, Crandel and Crandel dropped back to one place behind our team by the end of the race for nineteenth spot.

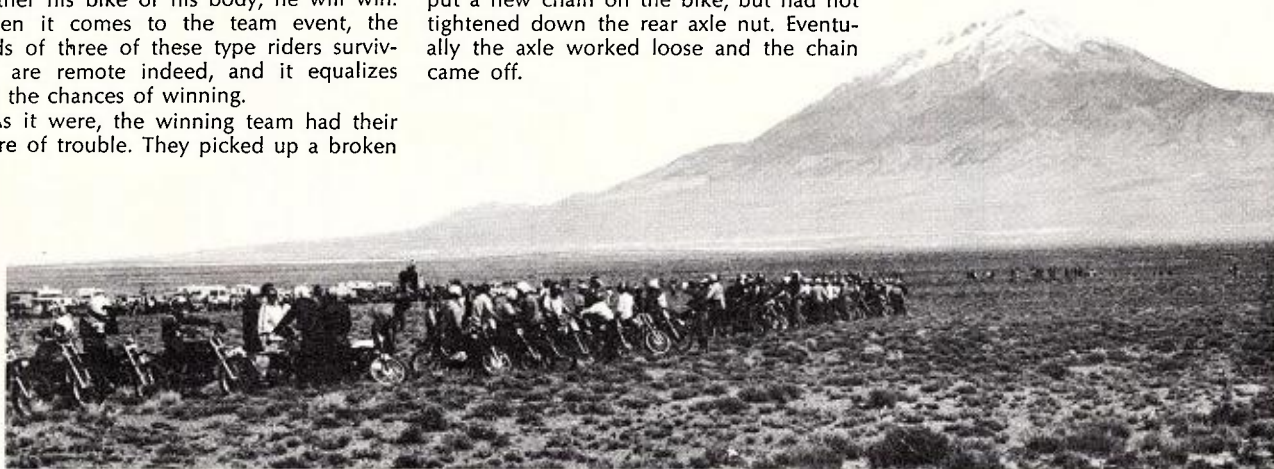
The problems experienced by our team were an example of what happened to many. Rick Jenkin's machine has always started first kick until the race started. Another example was Pat Thompson's Mk II Matador which never fouled a plug until we got to the first check point. Jenkins, Thompson and I are primarily trials riders, and this paid off nicely on the first lap when we finally got going. We were able to pass 90 percent of the field in the rough, rocky terrain which followed the first check point, as the low clearance bikes didn't make it. As long as the course is rough, you don't have to be a blazing fast rider to do well, and we were able to pick our way through successive hills of stalled riders. We estimate that we were in about sixth place when the only other mechanical problem happened to our team. They asked me later why I put the Loctite on the tool box and not on the rear axle nut. This was such a fine question that I took my time in answering. You see, I was riding a Bultaco Lobito and had not wanted the tool kit to become lost, so had Loctited the knob. Now Loctite treated knobs will open easily if you insert a quarter in the slot of the knob, but I did not bring my change with me, as I surmised that I would not be purchasing much of anything during the race. I had put a new chain on the bike, but had not tightened down the rear axle nut. Eventually the axle worked loose and the chain came off.

The teams that we had worked so diligently to pass now thundered by as I tried to open the tool box to get the wrench to tighten the nut to . . . etc., etc. Ah, the pain of it all! To stand in the maelstrom of dust stirred up by the wheels of a hundred motorcycles passing you, while all you can do is pound on your tool box with a rock. I considered asking one of them if he would loan me a quarter, but thought better of it. One Yamaha rider spied me making war on the reluctant tool box and shook his head at me as he passed, giving me the peace sign. I would have thrown the rock at him, only it was the only one handy and I needed it.

Finally, by the time Jenkins had backtracked to where I was stalled, the tool box was open and the problem was cured in a couple of minutes. Jenkins observed, "You probably should have put the Loctite on the rear axle nut instead of the tool box." He took it all rather well, however, considering that we went from sixth place down to forty-second at the end of the first loop.

The second loop was a twenty miler that headed out of the pits in a northerly direction until it came to the lower slopes of a mountain range. This was the same idea as the first and third loops: The circuits of the H and H would run out across a relatively flat wind-swept plain that was rougher than a cobb. This was because the wind had blown the dirt away from the area between the sagebrush plants and left humps of dirt three to nine inches high about two feet apart. The smoothest way to traverse this plain was to get up on the pegs and hit about 65 mph as this

(Text continued on page 21)



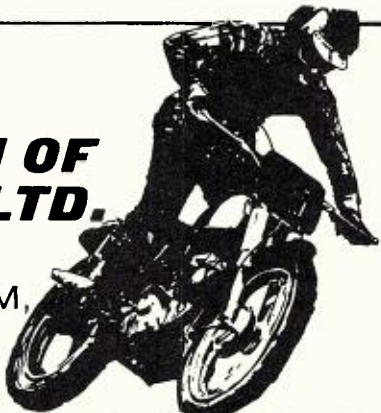
# THE FIRST ANNUAL WENDOVER CROSS-COUNTRY TEAM RACE.

## The Three-Man Hare & Hound



# HYLAND M.V. EXPORT DIVISION OF HYLAND CROWE LTD.

111 SOUTH ROAD,  
ERDINGTON, BIRMINGHAM,  
ENGLAND



## THE FAMOUS BARBOUR SUITS AVAILABLE

Heavyweight Suit \$43.20

Sea Mail Postage \$2.64

Lightweight Suit \$40.80

Air Mail Postage \$9.00

### BARBOUR SUIT STOCK SIZES

Size	00	0	1	2	3	4	5
Chest (over Jacket)	34"	36"	38"	40"	42"	44"	46"
Trouser Waist (overall)	30"	32"	34"	36"	38"	40"	42"
Inside Leg to ankle bone	28"	29"	29"	30"	30"	31"	31"

Different size Jacket and Trousers can be ordered together to ensure correct fit. Sizes 00, 0 and 1 are suitable for Ladies' wear.

THE GREEVES & A.J.S. (Y40 & Y50) SPECIALISTS. Join the many U.S. riders enjoying the finest and fastest spares service in existence. Quotations by Air Mail with pleasure—Also Villiers—Amal—Girling—Hepo-lite—Alpha. BIG JOHN or ASHMAN Moto Cross boots \$25.00 plus postage.

## A BLAST

Australia, a story and photos covering the Centralian Motorcycle Championships.

In the technical field you'll find Part II of our comprehensive "Tool Guide"; a feature that describes tools, from the common crescent wrench to the sophisticated torque wrench and Vernier gauge, their uses and their cost. This month we also feature a step-by-step story on the installation of a factory hop-up kit on the popular Suzuki 125cc Duster, and the results of the installation.

A variable expansion chamber has long been considered the answer to a two stroke tuner's dreams, and someone has finally come up with one. Elsewhere in this issue you'll read about a Variable stinger (easily installed on any expansion chamber) that allows the owner to "tune" his pipe to compliment the output of the engine.

One of the most pleasant aspects of putting this particular issue together was getting the story on the End Does Racing Club. The End Does is a group of very attractive young ladies who just happen to list motorcycle racing as their favorite pastime. The girls are not only good looking, they're good riders!

*Ken Doe*



### MOTO-CROSS LEATHERS \$69.95

- MX BOOTS GRADE AA \$49.95
- MX BOOTS GRADE A \$34.95
- MX BOOTS LACE & BUCKLE COMBINATION \$49.95
- MX GLOVES GRADE AA \$9.95
- MX SOX GRADE AA \$3.95
- MX SOX GRADE A \$2.95

U.S. SIZES



**FORK  
BRACES**  
\$ 6.95  
8.95  
15.95

### HANDLE BARS "CHROMOLY"



\$12.95

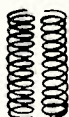
#185 DESERT BEND #186 MX BEND

### SILENCERS \$11.95

40% LESS NOISE  
NO LOSS OF H.P.



**HODAKA GEAR  
CHANGE SPRINGS**  
\$2.95 PAIR  
RACING TYPE



### VIEW ALL GAS FILTER \$4.25



### SHOP TOOLS

KW COLT BORES 1% to 2% \$ 995.95  
KW FW BORES 2.2 to 4% 1895.00  
KW STAND FOR FW BAR 330.40  
BN 20 TON PRESS 239.95

### EXHAUST SPECIALISTS



ALL MODELS

\$39.95

YOKOHAMA TIRES & TUBES  
GIRLING SHOCKS  
TIE DOWNS  
SPOOL HUBS & WHEELS  
FILTRONS  
PLUG CARRIERS  
ROTARY VALVES  
POLLY-OXIDE

AUTOLITE & NGK PLUGS  
AMAL CARBS.  
DOHERTY GRIPS  
AIR CLEANERS  
BLENDZALL  
GOGGLES  
PAULSON SHIELDS  
PUMPER CARBS

CHOPPER EQUIPMENT



SEND FOR OUR  
CATALOG \$1.00

### DISTRIBUTORS

7500 EL CAJON BLVD.  
LA MESA, CALIF. 92041  
714/465-8327





The Kawasaki Group is a giant industrial complex producing railway rolling stock, jet planes, electrical products, helicopters, carbines, and iron and steel. In addition, the Group operates a global network of shipping services. One member of the renowned Kawasaki Group, the Kawasaki Aircraft Company, Ltd., produces some of the most sophisticated motorcycles currently being manufactured.

Two and a half years ago Kawasaki set the motorcycle world on its ear when they introduced the phenomenal Mach III. This 3-cylinder bomb was, and is, one of the quickest motorcycles in the world. Particularly impressive is the fact that the machines sell for a mere \$1,000. Prior to the introduction of the Mach III, Kawasaki was known as a firm that produced quality motorcycles with broad general appeal. The introduction of the 3-cylinder 500cc machine indicated that Kawasaki wanted to go after the "high performance" oriented market. After the furor caused by the introduction of the Mach III settled down, people began to examine the Kawasaki product with a more discerning eye. Kawasaki manufactures both 2-stroke and 4-cycle motor bikes ranging in size from 650cc down to 50cc. One of the more popular machines in the line, the A1SS, is the subject of this report.

Actually, Kawasaki makes two 250cc twin cylinder machines. The A1 is fitted with down pipes which are mounted on either side of the bike. The A1SS appears to be identical to the A1 except for the exhaust pipe placement. On the A1SS both pipes are carried high on the left side of the machine. This "Street-Scrambler" form of styling has been with us for a number of years and it looks like it's going to be with us for years to come. Kawasaki's treatment of the pipes adds an unfortunate look of weight to a basically very well designed bike. The pipes are painted a flat black and perforated steel heat shields travel nearly their entire length. While we were not impressed with the appearance of the muffling system, we

# KAWASAKI

## A1SS 250



AN OUTSTANDING 250 STREET MACHINE  
BURDENED WITH SOME RATHER DATED "STREET-SCRAMBLER" STYLING.



were pleased with the job it did.

Much of the overall width of the Kawasaki 250 engine can be traced to the placement of the carburetors on either side of the crankcase. Bore of the engine is 53mm, stroke is 56mm, giving a total capacity of 247 cubic centimeters. Compression ratio is 7.0:1 and maximum output of 31 horsepower develops at 8,000 rpm. The cylinders are cast in a lightweight aluminum alloy which has a very high cooling efficiency. The alloy cylinders and cast iron sleeves are fused together into a strong metal layer by means of a special operation. Most cylinder heads are of cast alloy and spark plugs are centrally located.

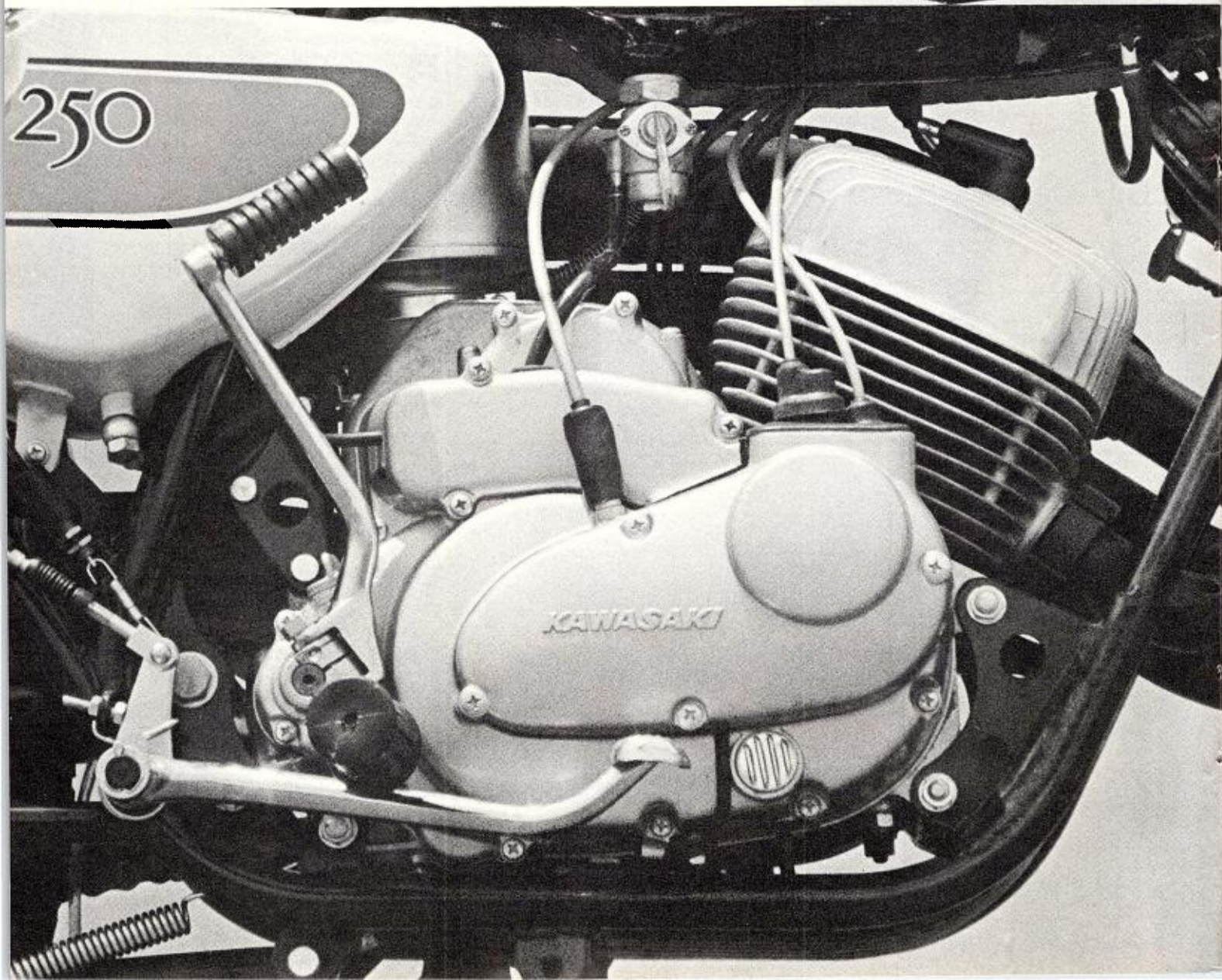
To allow for expansion caused by heat build-up, the pistons have a tapered design. The pistons are formed of high silicone aluminum which has a low thermal expansion ratio, high heat resistance and high abrasion resistance. Two rings are fitted to each piston. The top ring is chrome plated and the second ring is chemically treated on its surface in order to obtain a smoother

contact with the cylinder walls. A third expander ring is inserted on the second ring. This expander ring is a highly flexible octagonal band. The function of this third ring is to properly position the piston and prevent piston slap.

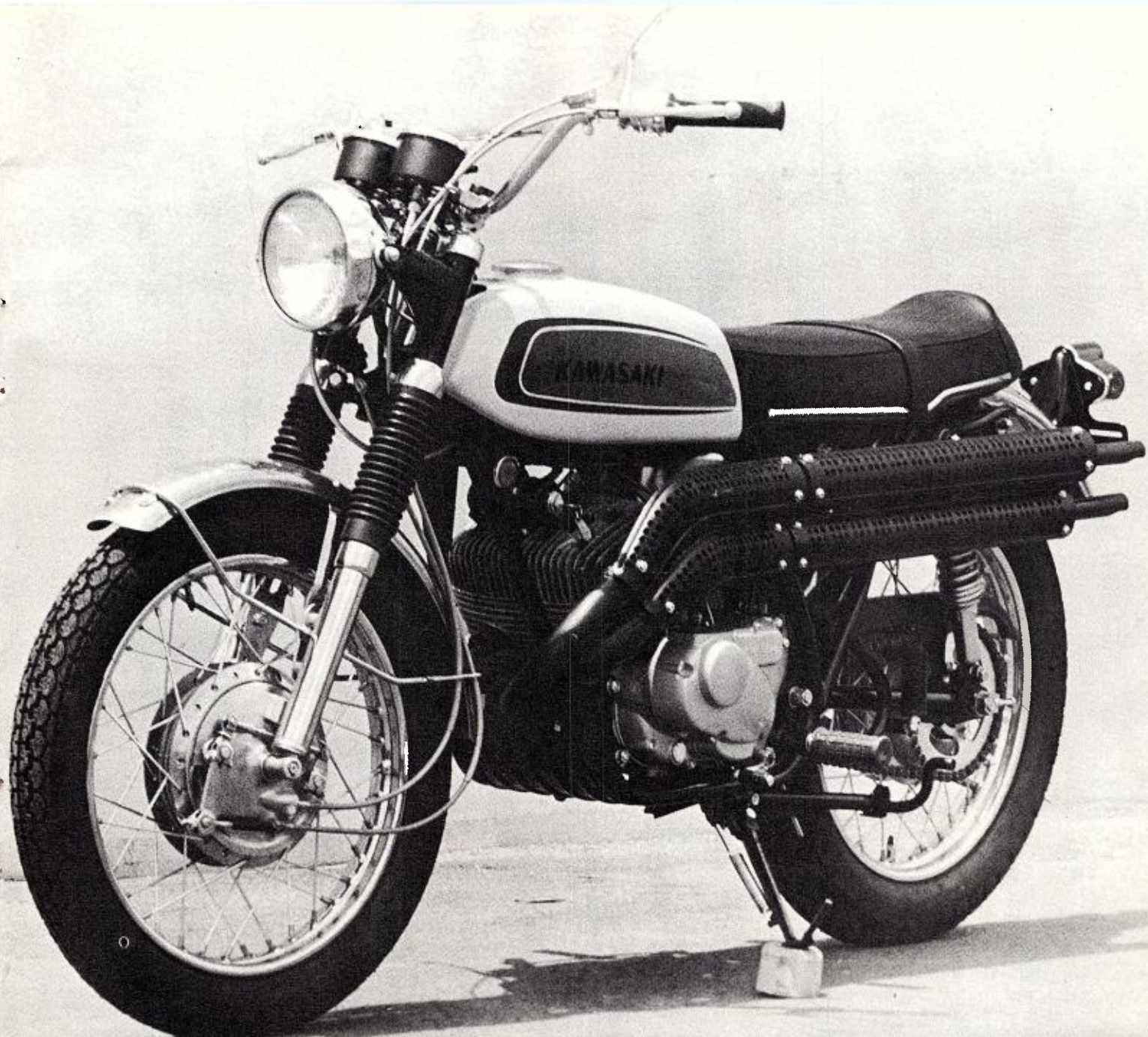
Both connecting rods are "H" in section and the big ends rotate on roller bearings. Four ball bearings are used to support the crankshaft and the crankcase is effectively divided into two compartments. The crankcase splits on the "horizontal" rather than the "vertical" plane (a fact which will be appreciated by any mechanic who

***Front forks on the A1SS are good and the front binder is excellent. The brake works in a progressive manner with no tendency to grab or shudder.***

***The Kawasaki powerplant develops 31 horsepower at 8,000 rpm. A bore of 53mm and a stroke of 56mm adds up to a total capacity of 247 cubic centimeters.***







has to work on the machine) and it is an aluminum alloy die casting. Primary drive is taken off the right end of the crankshaft where a helically cut gear turns the clutch hub. A 5-speed, constant mesh transmission is used in the A1SS. First gear is quite "low," while the remaining four ratios are very nicely spaced. Gear changes are made from the left side of the bike and the pattern is: down for low then up for the rest of the gears.

Ignition on the Kawasaki Twin is by means of CDI (Capacitor Discharge Ignition). Capacitor Discharge means that a capacitor is charged for a brief moment and when it discharges, the spark plug fires. Here's how it works: To charge the capacitor, battery (or magneto) power is first stepped up to 400 volts by a dc-to-dc converter. This voltage is then stored in the capacitor. The capacitor is controlled by a thy-

**Generally good styling on the Kawasaki 250 is marked by the gross appearance of the up-swept exhaust pipes. Capacity of the nicely shaped gas tank is a sensible 3.5 gallons.**

ristor which functions as an electronic switch. It has a built-in "gate" that is opened by voltage pulses supplied by a signal generator mounted on the generator rotor shaft. These voltage pulses are the pulses which time the engine. When a voltage pulse opens the thyristor "gate" the 400 volts stored in the capacitor is applied to the primary ignition coil. The secondary ignition coil steps up this voltage to 30,000 volts and fires the spark plug. The special spark plug has a built-in booster that steps the voltage up even more. All of this takes place in mere milliseconds of time.

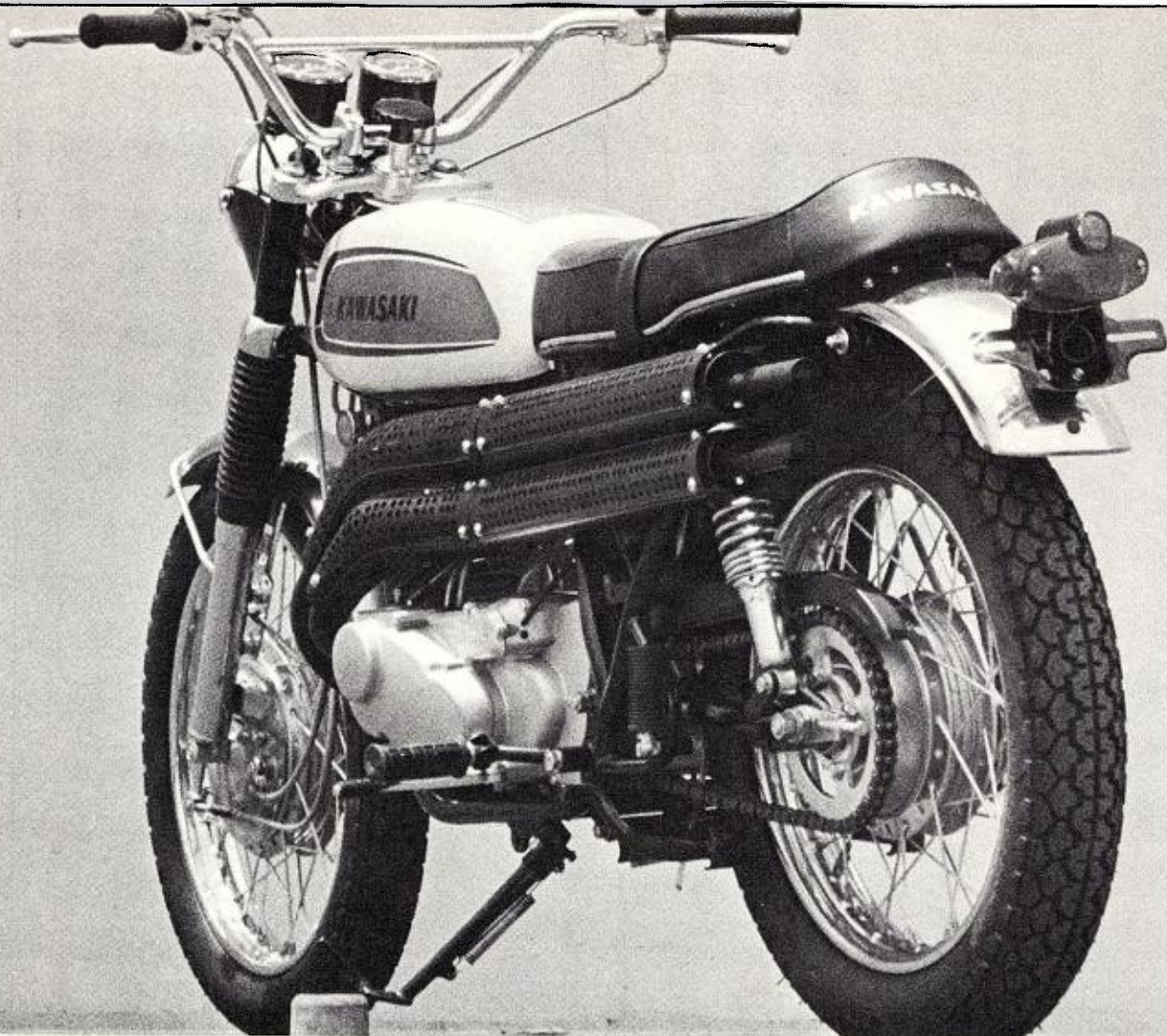
The advantages of the CDI System

is that it never needs to be adjusted or timed, there are no moving parts to wear out. This system also improves low-end pulling power without sacrificing higher rpm output.

The Kawasaki A1SS is lubricated by what the factory calls their Superlube system. Oil, carried in a tank mounted beneath the saddle, is delivered to a pump mounted on the right side of the engine. From the pump, the oil is carried by tubes to the intake ports where it is injected into the incoming charge from the carburetor. This method assures good lubrication of the crankcase, main bearings, large and small ends of the connecting rods, cylinder walls, pistons and piston rings.

An oiled felt and wire mesh filter element is carried in a metal canister mounted at the rear of the engine cases. Clean air is drawn through the element and then passed through





labyrinth cast in the engine cases before it reaches the carburetors. The two 22mm Mikuni carburetors used on the A1SS are quite smooth in operation and throttle response is very good. The generator is fitted in a thin housing cast into the top of the engine cases just aft of the cylinders. Considered as a whole, the A1SS powerplant is a very attractive engine. All external surfaces are beautifully finished and, during the time we had the machine in our possession, it remained completely oil tight and quite clean.

The A1SS engine is quite a willing

***Muffling on the A1SS is good, however, the carburetors are rather noisy when the bike is accelerated hard. Acceleration is quite good and top speeds in the neighborhood of 100 mph are easily obtained.***

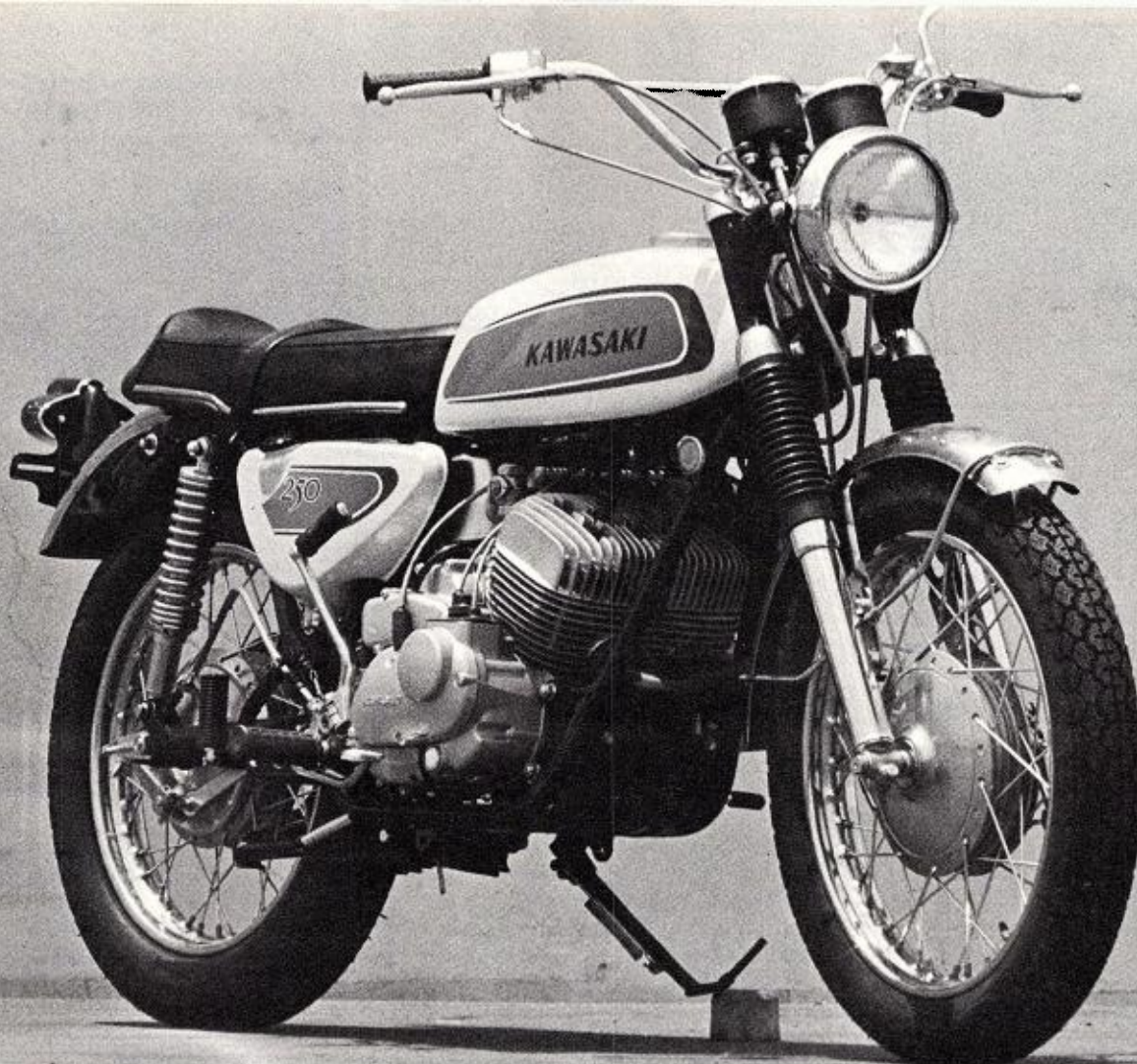
***All paint work and plating on the Kawasaki 250 is of a very high order. The saddle flips up to give access to the battery, tool kit, and portions of the ignition system.***

performer. The engine starts easily (usually by the second or third kick) and no great amount of time is required for it to reach operating tem-

perature. Acceleration is definitely on the brisk side and with the engine properly tuned, speeds in the neighborhood of 100 miles an hour are easily obtained. Muffling on the bike is good, however, when accelerating really hard induction noise is quite high. Thanks to the 5-speed gear box in the A1SS keeping the engine operating in its proper range is an easy matter. At 330 plus pounds, the Kawasaki 250 can hardly be considered a true lightweight. It does, however, handle very well on a twisting mountain road. Even with so much weight carried up high, the bike can be flicked through series of quick bends with ease.







Suspension on the A1SS is orthodox in both appearance and performance. The lower, or slider, portions of the forks are chrome plated, while the upper tubes are protected by accordion pleated rubber boots. Suspension at the rear of the bike is provided by a pair of hydraulically damped shock absorbers fitted with progressively wound springs. The shocks are 5-way adjustable and even in their "soft" position they are good for pavement riding. When carrying a passenger or a load, it's necessary to jack up the rear end a step or two. With five degrees of ad-

**The width of the engine can be traced to the mounting of the carburetors on either side of the crankcase. A pair of 22mm Mikuni carburetors feed fuel to the combustion chamber.**

justment available, the owner of the bike should be able to set up the rear end to meet any demands. Action of the front end was, in our opinion a bit too soft. The front end is fine for highway riding; on broad straight roads it will absorb those irritating little jolts which might otherwise be passed on to

the rider's arms. When braking hard or really knifing into a turn, the front end tends to compress too easily. Personally, we would prefer something a little firmer.

Supporting our contention that the A1SS is essentially a street machine tricked out in Street-Scrambler form, is the choice of rubber furnished with the bike. At the front of the machine is a 3.00 x 18 inch tire, while the rear is fitted with a 3.50 x 18 cover. Both tires have strictly a road type tread pattern. Full width finned alloy hubs

(Text continued on page 20)

Make .....	KAWASAKI
Model .....	A1SS
Price As Tested .....	\$715.00
Engine Type .....	TWO STROKE, TWIN
Bore .....	53mm
Stroke .....	56mm
Displacement .....	247cc
Compression Ratio .....	7.0:1
B.H.P. at R.P.M. ....	31 AT 8000
Carburetor .....	MIKUNI (2-22mm)
Ignition .....	BATTERY & COIL
Fuel Capacity .....	3.5 GALLONS
Lubricating System .....	SUPERLUBE INJECTION
Clutch Type .....	WET, MULTI-DISC

Final Drive .....	CHAIN
Starting System .....	KICK, FOLDING CRANK
Gear Ratios .....	1st: 2.50:1; 2nd: 1.53:1; 3rd: 1.13:1; 4th: 0.92:1; 5th: 0.78:1
Top Speed .....	96.27 MPH
Tire Size .....	FRONT: 3.00 x 18; REAR: 3.50 x 18
Suspension .....	FRONT: TELESCOPIC FORK; REAR: SWINGING ARM
Frame Type .....	TUBE STEEL, DOUBLE CRADLE
Weight .....	323 POUNDS
Wheelbase .....	51 INCHES
Peg Height .....	8.5 INCHES
Ground Clearance .....	6.7 INCHES
Seat Height .....	31 INCHES





## DUNECYCLE<sup>®</sup>

### TALK ABOUT PERFORMANCE!

At the Grand National ATV Championship Races—Pine Knob, Michigan—DUNECYCLE<sup>®</sup> took top honors in all three classes entered...

First Stock Class (0-199cc)  
**1st and 2nd**

Second Stock Class  
(200cc-250cc)  
**1st, 2nd and 3rd**

Modified Class (0-299cc)  
**1st, 2nd and 3rd**

DUNECYCLE<sup>®</sup> is the original three wheel fun machine. It has a variable speed transmission as well as right and left independent rear brakes. All year fun for the entire family. Send today for more information including accessories now available for all six models.

#### A.P.E. PRODUCTS

13727 Excelsior Drive, (Dept. 114)  
Santa Fe Springs, California 90670  
(213) 921-2585

\*Trademark of A.P.E. Products / Patent Pending  
©1970 A.P.E. Products / A.P.E. Products is a  
division of Allied Pacific Mfg., and a member of  
Tower Industries, Inc.



## DUNECYCLE<sup>®</sup>

There's no better way to go!

## KAWASAKI A1SS 250

are used at both ends of the A1SS. The front hub is fitted with a double leading shoe brake and the rear hub carries the more common single leading shoe stopper. The rear hub is also fitted with a rubber 'bisquit' to absorb some of the shocks which might be passed on to the drive train. We were very impressed with the efficiency of the braking system on the A1SS. The brakes seem ideally suited to the weight and potential of the machine and repeated use brought no sign of fade.

The frame used in the Kawasaki A1SS is a double loop device. Two cradling members descend from the steering head, pass beneath the engine, and then curve upward to terminate at the end of the backbone tube. The large diameter backbone adds much to the rigidity of the frame and traditional support is provided by a second, smaller diameter, backbone which runs between a cross brace and the nose of the sub-frame assembly. The main cradle members are strengthened by a pair of robust cross braces. The sub-frame assembly consists of a pair of diagonal tubes which provide strength, and a pair of horizontal members which support the feet and rear fender. Two hefty tabs welded within the curve of the cradle members, provide the mounting point for the swinging arm. The arm is constructed of tubular stock and the area around the pivot is built-up to provide additional strength.

The Kawasaki A1SS frame is probably heavier than it need be. However, this is true of most frames of Japanese manufacture. On a bike of this sort it's certainly better to put up with a little additional weight brought about by designing for strength. Finish on the tube work is good. All welds are nicely dressed and the glossy paint is well applied.

Actually, Kawasaki's have always been extremely well finished motorbikes. The Kawasaki A1SS struck us as having something of a dual personality. The bike handles stop-and-go city traffic in a very serene manner. The same can be said when you're out riding over a meandering country road. If the urge for a little more excitement strikes you, the A1SS will be glad to satisfy that wish. As we've already said, acceleration is definitely brisk and, when pushed, the scooter will handle the curves in the road in a very fine manner. From the standpoint of appearance, the A1SS is not a really flashy machine, however, when called upon, it's capable of performing with the best of them. ●

## "CARB-TUNE"



### PERMANENTLY INSTALLED CARB TUNING DEVICE FOR CB 750

#### NEW IMPROVED MODEL

Fits all Honda 4's, including new K-1.

- Installs in minutes
- Balance carbs yourself and save cost of device first time you use it.
- Greatly reduces spark plug fouling.
- Complete with instructions.

**ONLY \$39.95 (prepaid anywhere)**

Also DEEP FINNED OIL PAN for Honda 4 after engine # 1007415.

**\$24.95 (prepaid anywhere)**

*Satisfaction guaranteed or your money back!*

**Bowman Products**

2546 MANHATTAN AVE. dept MC-8  
MONTROSE, CALIFORNIA 91020

## MOTORCYCLE INSURANCE

**Insure with the Largest  
Oldest and most Reliable**

All forms of insurance for Motorcycle and Scooter Owners, and Riders At Low Rates.

- Bodily Injury and Property Damage Liability
- Fire, Theft & Collision

Write for applications and information on our new budget premium plan. No obligation. Immediate coverage on acceptable applicants. Local adjusters handle your losses. All ages accepted except those under the age of 16 in Colorado and Minnesota, and under 21 in Washington, D.C. (No insurance written for residents of Maryland, Massachusetts, New Hampshire, New York, Nevada, North Carolina, South Carolina or Virginia.)

#### MOTORCYCLE UNDERWRITERS

39 So. La Salle St. Suite 1116-L  
Chicago, Illinois 60603

# subscribe

to Modern Cycle Magazine

*Exclusively specializing in*

## HONDA Parts!

*& accessories for all makes & models*

**1-DAY MAIL ORDER SERVICE ANY-  
WHERE — AIRMAIL IF REQUESTED**

Send year, model, engine & frame no. with all orders. Write for free list of all Honda Repair Manuals and Parts Catalogs.

**THRIFTY LAD HONDA, Dept. MC-8**

2411 Lincoln Bl., Santa Monica,  
Calif. 90405, (213) 392-3066



# Hare & Hound

would let you skim over the tops of this 10,000 acre test; however, this flat plain was interrupted often by wash-outs and minor ravines which were in many cases about six feet wide and six feet deep. You can jump a thing like that, providing you know that it is there. Many riders evidently were surprised by these as many ends were seen, many bikes were broke.

Cris Draayer, who laid out the course, did a good job as the course had everything in it, even water. We had a first-hand opportunity to observe this water on the third loop when we rode into the small canyon that contained the creek. The course zig-zagged across this series of mud holes until it came to the great mother of all mud holes. Big Mama! Big Mama lay at the bottom of a five foot cliff which hung on the side of this canyon. Once you came to this point, the only place to go was down. Jack Dobson, who was on the team with Herb Uhl, said he wished that he had brought a movie camera to capture the expression on ISDT veteran Uhl's face as he dove off the five foot cliff and shattered into the three foot deep Bib Mama, which contained a mixture of mud not at all unlike runny concrete. Dobson said that was the only time he ever saw Herby blow his cool.

We missed the opportunity to see this as Frank Trafford, the third man on his team, was helping Herb out as we came to the cliff. My teammates went off safely to the left of Big Mama, and I thought that I had escaped to the right. Not so. I managed to get down stream of the hole with my wheels but had to take one little dab with the left foot. This all resulted in my going into Big Mama up to my ear as I toppled into it. There was nothing under my foot but Big Mama when I took the dab.

And so it went; we passed Herb's team, who eventually passed us just a mile from the finish. Everybody passed somebody at least twice. The teams of Bob Moore, Larry Bodily, Bob Leonard and our team passed each other back and forth three times in the third loop.

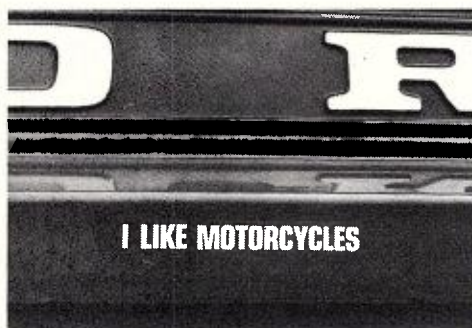
When the dust had all settled, the first money was picked up by Woody Lawhon 250 OSSO, Lloyd Lawhon 250 Yamaha and John Henry 125 Yamaha. Second team was the 100 Hodaka of Tom Bacca, Kay Sorenson 400 Husky and Garey Giles 360 Bultaco. Third place was grabbed by M. Maero 250 Yamaha, S. Swindell 100 Honda and D. Roberts 500 Triumph. Fourth in the trail that had led us from the desert dust to the mountain snow was L. Macky 100 Bultaco, G. Mickelson 250 Bultaco and J. Bates 400 Maico. Cris reports that about thirty teams out of the seventy-one finished the course. The thing that is intriguing about all of this is the 'iffing.' Every team knew that they might have won . . . IF. Like Jenkins said, "We'd have done a lot better, John if you'd put the Loctite on your rear axle nut instead of the tool box." •

## NEW! FROM GROWCO

**1005 I LIKE MOTORCYCLES.** Here's the button that will put the finishing touch to that favorite hat or jacket. These large 1 1/4 inch pins are white with brilliant red type and sell for: 2 for \$1.00; 5 for \$2.00. ➔



**1010 PAIN HURTS.** The button that is guaranteed to bring a chuckle from anyone who sees it—especially those who have gone through an unpleasant experience such as failing to see that two foot ditch while roaring through the desert at 50 miles an hour. OUCH! PAIN HURTS!! These large 1 1/4 inch buttons are yellow with black print and make a great gag gift. 2 for \$1.00, 5 for \$2.00. ➔



**1009 I LIKE MOTORCYCLES.** These stickers are just the thing to dress up the rear window and bumper of your car, truck, etc.

NOT DECALS! , decals are difficult to put on and they also chip and peel in a short period of time. Our stickers are self-adhesive clear vinyl with durable white type—just peel off the backing and apply to any clean surface. These stickers are sold in a set of two; One for mounting on a bumper or outside surface, and the other is printed in reverse for mounting on the inside of a car window. \$1.00 per set of two.

**1006 WORRY STONE.** Trying to quit smoking? Tension getting you down? Bitten off all of your fingernails? Well here's a better way, try this ancient Indian method of relieving tension—just rub the stone with your thumb and be amazed at the calming effect it brings. Stones are hand carved from solid onyx. \$1.00 each. ➔



ACTUAL SIZE

\*\*\*\*\*

• Please RUSH the items I have listed below to: ➔

• Name .....

• Address .....

• City .....

• State ..... Zip .....

STOCK NO.	QUANTITY	TITLE OR DESCRIPTION	PRICE

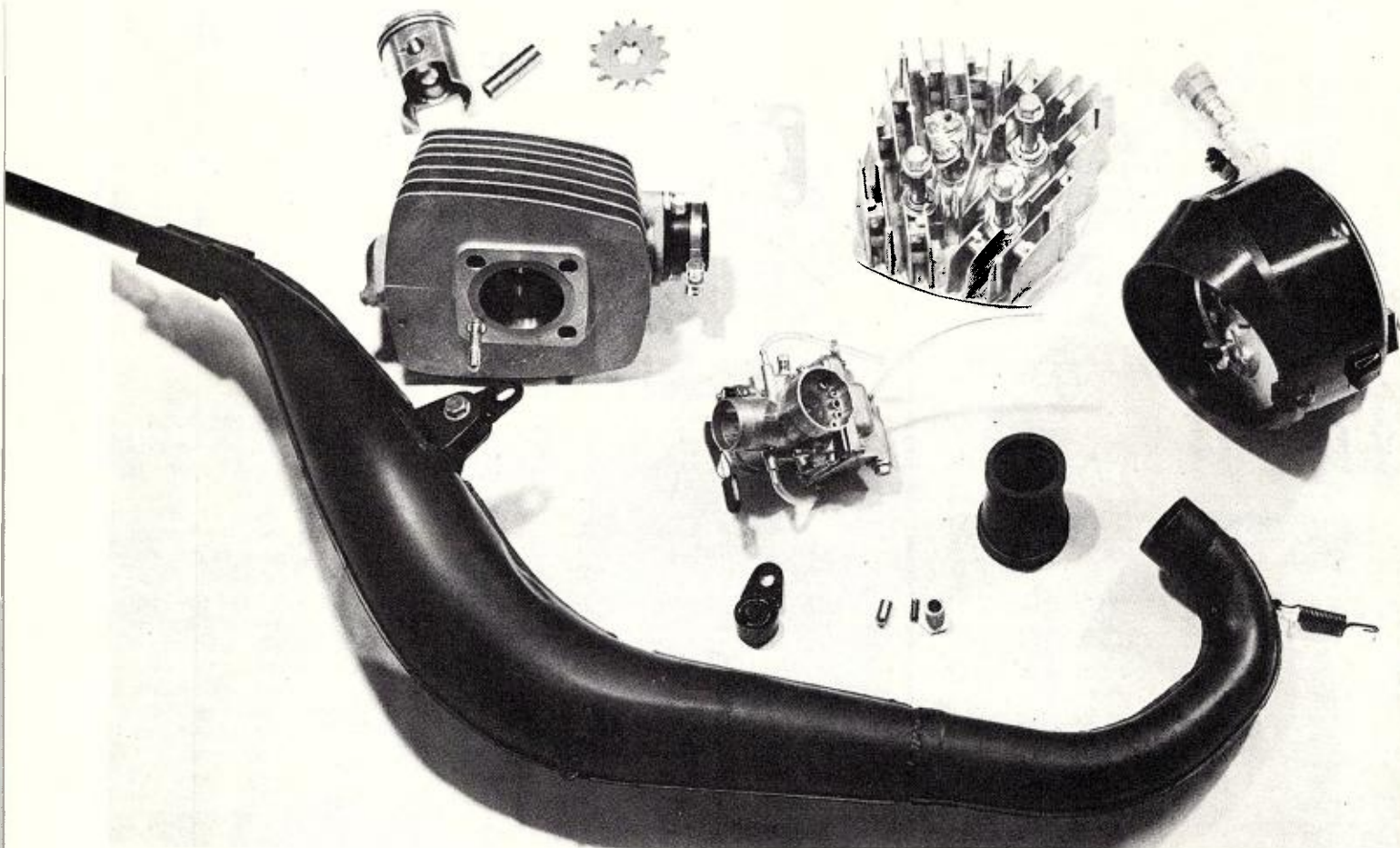
TOTAL AMOUNT ENCLOSED ➔ \$

**G**ROWCO ENTERPRISES, P.O. BOX 1202, CANOGA PARK, CALIFORNIA 91304



# New "Hop up Kit" for the

THE NEW KIT REALLY MAKES THE "DUSTER" DO ITS THING. FOR A MODEST \$119.95 YOU



**The new Suzuki TS125 R MX Hop Up Kit. Here are the main components which help extract 20 horsepower from the Duster. The complete kit contains over 36 new parts for the 125cc engine, and the entire package carries a low price tag of only \$119.95.**

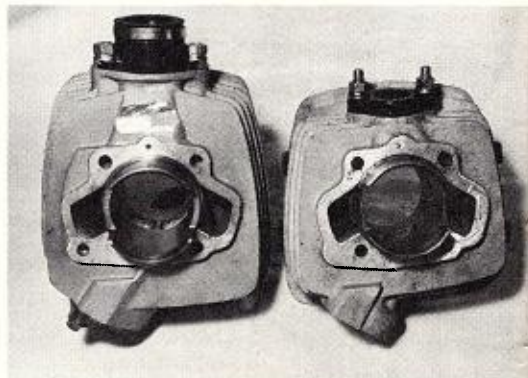
Suzuki has a way of introducing many of their new offerings with little or no fanfare. Yet, after last year's impressive first and second place victories in the World's 250cc Moto Cross Championships, Suzuki has proven that they are more than capable of producing winning machinery. Then, as if this wasn't enough, they came out with their TM-400 which has all the earmarks of being another big winner for Suzuki within the very near future. And, in 1971, Suzuki introduced the 125cc Duster, a new addition to their growing stable of winners.

In stock form the Duster's 13 horsepower two-stroke engine will easily propel the lightweight machine and its

rider over the roughest terrain about as quick, or quicker, than anything else in its class. While many people are completely satisfied with the bike as is, there are always those who have that insatiable craving for more from their machine. Well, if this is your "thing," you needn't search any further than your local Suzuki dealer. The factory has just recently released a "Hop Up Kit" for the Duster that is not only appealing to the pocketbook, but it works like "Gangbusters."

Your Suzuki dealer knows this "Hop Up Kit" as part #99104-07500, and for \$119.75 you can also learn about this kit, but you will know it in terms of increased horsepower rather than a part number. The stock 125cc Duster develops 13 hp @ 7,000 rpm, and with the addition of the "Hop Up Kit" we feel the factory is extremely conservative in their 20 hp @ 9,500 rating. When you consider everything that is contained in the kit, which includes a complete new top-end for the 125cc Duster engine, the \$119.95 price tag seems ridiculously cheap. The TS125R

**One of the most noticeable differences is in the exhaust passage of the new cylinder. The cylinder on the right shows what this passage is like in stock form, and the one on the left is part of the new Hop Up Kit for the Duster.**



MX Kit (part #99104-07500) includes the following parts:

DESCRIPTION	QUANTITY
Cylinder Head	1



# Suzuki Duster

**CAN FIND A WHOLE NEW WORLD OF POWER WHICH THE FACTORY RATES AS 20 HORSEPOWER.**

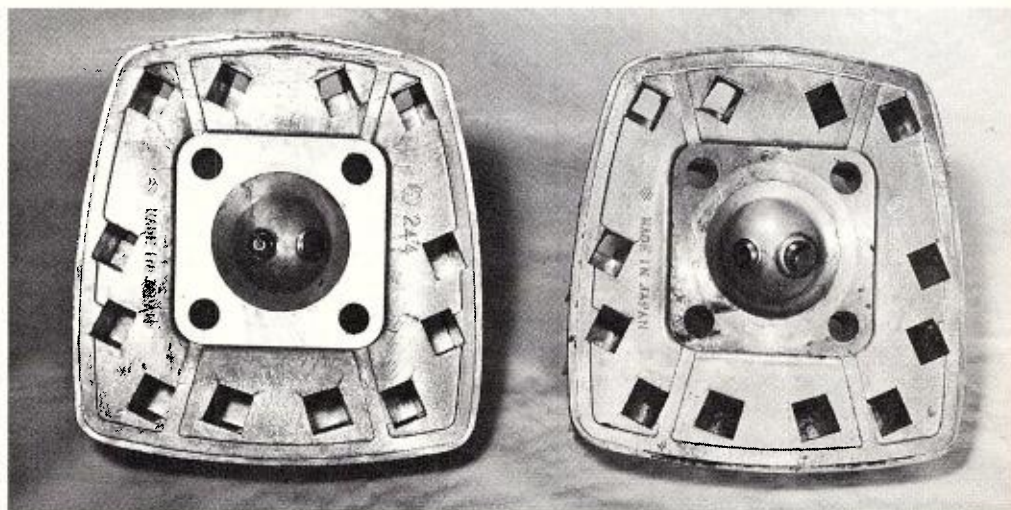
Cylinder Head Gasket	1
Cylinder Head Stud Bolt	1
Cylinder	1
Cylinder Stud Bolt	1
Cylinder Head Nut	2
Cylinder Head Washer	2
Cylinder Head & Expansion Chamber	
Lock Washer	3
Piston	1
Piston Ring Set	1
Carburetor Assembly	1
Main Jet #170	1
Main Jet #190	1
Main Jet #200	1
Intake Pipe	1
Intake Pipe Gasket	1
Intake Pipe Clamp	1
Intake Pipe Clamp Screw	1
Intake Pipe Stud Bolt	2
Air Inlet Hose	1
Air Cleaner Assembly	1
Air Cleaner Bolt	3
Air Cleaner Washer	3
Air Cleaner Lock Washer	3
Expansion Chamber Assembly	1
Expansion Chamber Support Damper	1
Expansion Chamber Bolt	1
Expansion Chamber Nut	1
Expansion Chamber Stopper Spring	1
Spark Plug (NGK B-8EN)	1
Gear Shift Cam Stopper	1
Gear Shift Cam Stopper Housing	1
Gear Shift Cam Stopper Spring	1
Engine Sprocket 13T	1
Rear Sprocket 58T	1
Rear Sprocket 64T	1

Fortunately, we were in the right place at the right time when Suzuki of Van Nuys had just received their first kit. Dan Zeman, owner of Van Nuys Suzuki, was anxious to install the kit on a new Duster, and agreed to let us take photographs while the modification was being done. Dan, who is a racer at heart, decided to let Mike Hardesty install the kit on his Duster.

Mike is partially sponsored by Suzuki of Van Nuys, and he has done real well aboard his Duster at various events held in Southern California. Fourteen-year-old Mike received some guidance during the installation from Dave Frisk, a more than qualified mechanic who heads up the Service Department at Suzuki of Van Nuys.

Follow along while we explain how you can gain the most in performance and power from this new offering by Suzuki.

One of the most noticeable differences is the exhaust passage of the cylinder that comes in the kit. It is much larger than in the stock cylinder, and looks completely different. To install the cylinder all that needs be done is to replace the cylinder stud bolt on the front left side with a shorter one, and move it further to the



**The new Duster head on the right has a larger combustion chamber than its stock counterpart on the left.**

**And, it also appears that the contour of the chamber is slightly different.**

left. The shorter stud comes in the kit, and the bolt hole has already been drilled and tapped in the stock 125cc case. After moving the stud outboard the cylinder fits using the stock head bolts and a special nut and washer that comes in the kit.

If you want, there can be a slight amount of power gained by lightly polishing the passages in all the ports. Also, clean up all the port edges with a fine file or emery cloth. You can use the stock base gasket to install the new cylinder.

The cylinder head should be installed with the copper head gasket which comes in the kit. Be sure that you have a flat washer under the head bolts, and torque them to 15 ft. lbs. The hole in the LEFT side of the head is for a long-reach spark plug (NGK B-8EN or equivalent). The hole in the RIGHT side of the head is for a compression release. If you don't use a compression release, pull the release plug out of your stock head and install it in this hole. **DO NOT PUT A SPARK PLUG IN THE RIGHT SIDE.**

The kit comes complete with piston and rings. This piston differs slightly from the stock piston in that it has oil grooves around the ring lands to aid lubrication and prevent scuffing. Also, the length from the wrist pin hole to the skirt on the intake side is 1mm shorter than the stock piston. This, along with the different cylinder port, has changed the intake port timing in the kit version.

Both the top and bottom rings are the flat type, and should be installed

so the small stamped letter near the end of the ring is facing towards the top of the piston. Then, to guard against seizure, after about thirty minutes of operating time you should remove the cylinder and sand both the cylinder and piston with #400 emery cloth wherever there is any evidence of scuffing.

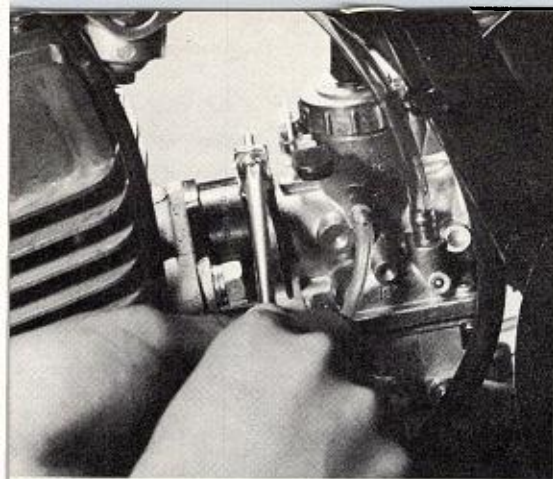
The stock 125cc Duster comes with a VM24SH carburetor. To help the engine breathe better with the new modifications, the kit contains a VM-

**The kit comes complete with a new piston and rings. The piston differs slightly from the stock piston as it has oil grooves around the ring lands to aid the lubrication and prevent scuffing. The intake side of the new piston is 1mm shorter in length than the stock unit, attributing somewhat to the change in port timing.**

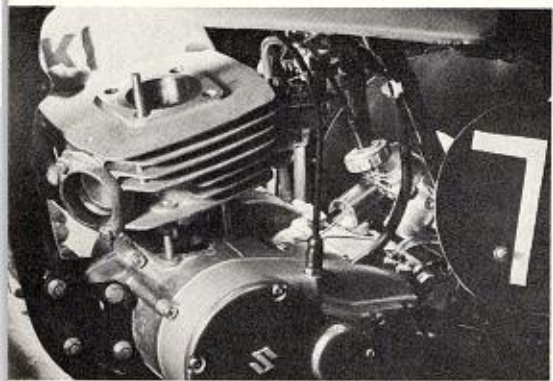




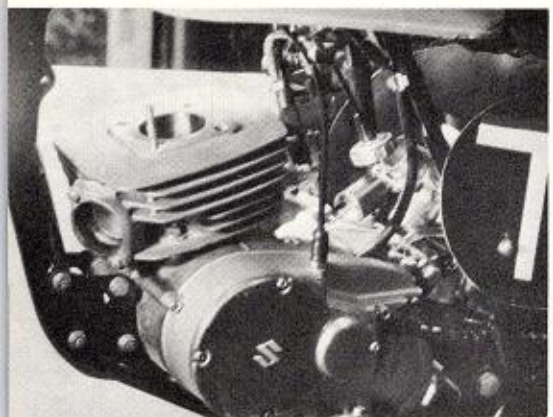
# Hop up



**The VM24SH carburetor which comes with the Duster in stock form is replaced by a larger VM26SC carburetor. To minimize the amount of vibration, the new carburetor is mounted in rubber. The "float-mounting" absorbs most of the vibration adding to the performance, and the mounting bolts stay tightened.**



**The kit is easily installed. This is just about the roughest part of the modification, squeezing the rings while trying to slip the new cylinder in place. Note the head stud. The front left cylinder stud is replaced with a shorter one, and moved further out which accounts for the head stud.**



**With the new cylinder in place you can see how the shorter cylinder stud holds its end down while another stud holds the head.**

26SC carburetor. This unit is an increase of 2mm over the stock carburetor, and the specifications of the new carburetor are as follows:

Main Jet: #180 (#170, #190, #200 optional)

Jet Needle: 5DP7-3rd

Air Screw: 1 turn out from bottom

Pilot Jet: #35

To minimize the amount of vibration, the carburetor is rubber mounted on both the intake pipe and the air cleaner side. All of the necessary hardware for "float-mounting" comes with the kit.

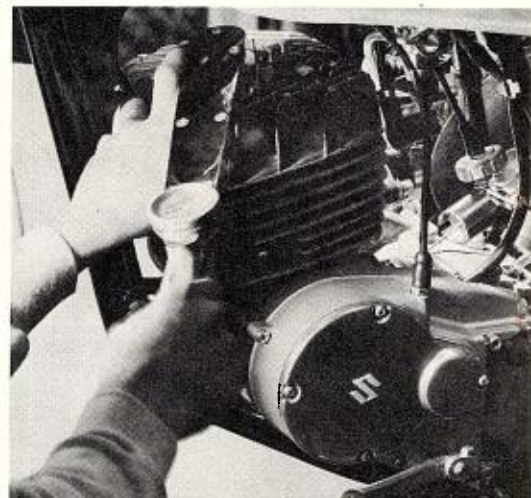
The new carburetor also has a larger float which will hit the gearshift cam stopper housing unless you install the stopper and spring that come with the kit.

The new air cleaner has a larger filter element (part #13780-28710) which minimizes the amount of resistance for the air to flow. For easy replacement the element has been installed in the air cleaner body with two wing nuts. The air cleaner is fitted on the frame with 6mm bolts, using the stock clamps, along with a new inlet hose which is supplied in the kit. (Note: Do not remove the bolt at the rear of the engine cases where the tachometer drive is located. When installing the filter. This might allow the tach gear to fall into the engine which would be bad news when you fired up the engine.)

The expansion chamber that comes in the kit can be installed by using the stock pipe clamp, gasket and bolts. Included with the chamber is a support to fasten it at the rear, and a special expansion chamber spring (part #9443-11002) to prevent it from rolling. Aside from being just welded at the "stinger," this section has also been gusseted, to lessen the chances of the pipe cracking in this area.

When the "Hop Up Kit" is installed on the Duster, there's a good chance the stock clutch won't take the extra horsepower that has been added. To avoid trouble in this area, you have one of two choices: Screw the stock clutch springs in a turn or so beyond the standard setting, but make sure that the bottoms of the springs don't touch the clutch housing. There should be approximately .020-inch clearance between the housing and the springs. Then, for additional insurance, it would be wise to fit an extra driven plate between the clutch sleeve hub and the inside drive plate.

Or, if you find that because of competition or hard riding clutch slippage is still a problem, you can increase the



**Once the cylinder has been bolted in place, the head is the next item to go on. The three head bolts, and one nut, should be torqued to 15 ft. lbs. The hole in the LEFT side of the head is for a long-reach spark plug (NGK B-8N or equivalent). The hole in the RIGHT side is for a compression release. If you don't use one, pull the release hole plug out of your old head and install it in the new one.**

clutch capacity by installing additional drive and driven plates, along with stronger springs. Here is a list of the parts which should eliminate any problems of a slipping clutch:

11341-28700	
Clutch Cover	1 piece
21410-28700	
Clutch Sleeve Hub	1 piece
09443-12010	
Clutch Spring	7 pieces
21441-10000	
Clutch Drive Plate	1 piece
21451-28000	
Clutch Driven Plate	1 piece
23111-29000	
Clutch Push Rod	2 pieces

(Note: Fit the above clutch springs so the bottom ends are in line with the bottom surface of the clutch sleeve hub.)

When installing the Hop Up Kit, the Suzuki CCI oil mix system should be disconnected, meaning you're going to have to go back to the old archaic thing of pre mixing the gas/oil. But, to insure proper lubrication with the pre-mix, disconnect the oil pump control cable. Then, with a piece of welding rod or similar type of rod, wire the control lever on the oil pump so that it is locked open at the second



punch mark from the idle position. This will open the lever about 20 degrees. Block off the control cable adjuster hole with the 8mm bolt (part #01121-08168) supplied in the kit. Now switch the two oil lines so that the one which previously went to the main bearing is now connected to the cylinder, and vice versa. This not only supplies the big end of the connecting rod with more oil, but it will also prolong the life of the engine. Initially, you should start off using a ratio of 20:1 for the gas/oil mixture. Later, you will probably be able to lean this mixture down to a ratio of 25:1, but to be on the safe side start out with the richer mixture. The gasoline should have a rating of at least 90+ octane. Suzuki recommends that a degummed castor-based oil be used with the Hop Up Kit, such as Super Shell M, Castrol R30., etc. Use a good quality SAE 20W/40 multigrade oil in the gearbox, and the proper amount is 550cc's, slightly more than one-half (U.S.) quart.

Also included in the kit are: a 13 tooth countershaft sprocket, a 58 tooth rear sprocket, and a 64 tooth sprocket also for the rear. As far as the right combination, the conditions of the track dictate what the correct gearing should be. If you have a wide selection of gear ratios, you'll get the most out of your Duster under any conditions. To help you in this we have listed the following sprockets which are available as an option from Suzuki:

PARTS NO.	SPROCKET
27511-08710	Engine Sprocket 13T
27511-20700	Engine Sprocket 14T
64511-28730	Rear Sprocket 61T
64511-28750	Rear Sprocket 67T

Essentially, that pretty much covers the new Hop Up Kit Suzuki has come out with for the 125cc Duster. However, we'll let you in on some other little goodies that are also available from Suzuki which can make your Duster really feel its Cheerios. Unfortunately, these items are so new that we were not able to find a dealer that had them yet, and we have no photographs.

One item which offers an appreciable increase in performance is what Suzuki calls their Pointless Electronic Ignition. This new CDI ignition system is transistorized and looks quite similar to the unit used on its bigger brother, the TM-400 Suzuki. The mid-range power of the Duster is much more responsive with this optional ignition system.

The system consists of three main

parts: the magneto, the CDI unit, and an ignition coil. The unit can be easily installed on the Duster, and it is available at your local Suzuki dealer.

The new system is designed so that the ignition timing varies with the demands of the engine being regulated by the rpm of the engine. When installing the PEI unit on the Duster, you merely set the mark on the stator plate so that it lines up with the screw that holds stator plate, tighten everything, and you have obtained the correct ignition timing. For added insurance, the ignition can be easily checked with a timing light by starting the engine, and then bringing it up to 6000 rpm. At this point, use the timing light and check to see if the mark on the core is falling between the two outside marks on the rotor. If it is within this range, the timing is properly set at 22 degrees (plus or minus 2 degrees) BTDC.

Suzuki's PEI ignition unit for the Duster carries the following parts:

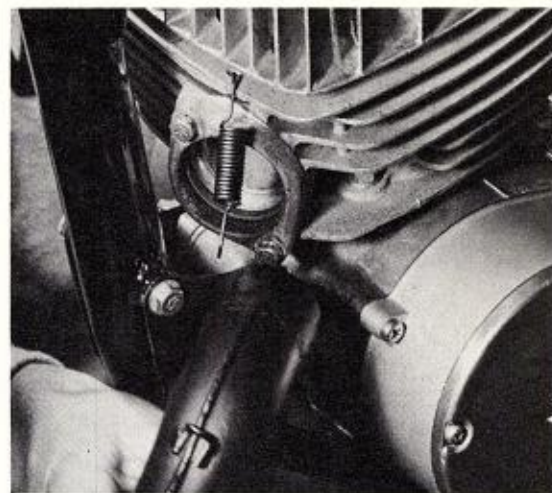
PARTS NO.	DESCRIPTION
31900-28700	CDI Assembly Unit
31911-28700	CDI Protector Unit
32100-28700	Magneto Assembly
33410-30200	Ignition Coil Assembly

If you switch to this new type of ignition system on your Duster, don't use surface-gap spark plugs. This type of plug will cause fouling, and can ruin your ignition coil as well.

If with the Hop Up Kit you would still like to use the CCI oil mixing system, an optional plastic bottle (part #44610-17010) can be substituted for the oil tank that was removed to make room for the air cleaner in the kit. The bottle has a capacity of 130cc's, and can be installed at the front part of the rear fender. The installation can be simplified by using a holder (part #63112-28000) which is easily mount-



**Once the new head and cylinder are torqued down, the job is almost finished. Depending upon how fast you work, the entire modification shouldn't take much over 1½ hours.**



**The new expansion chamber is slipped into place. Be sure that the two bolts holding the flange to the port are loose when installing the pipe. If they aren't, you'll never get the pipe in the port as they compress and expand the gasket around the pipe to seal the exhaust. Also, if your old gasket looks a little ragged this will make the pipe harder to fit in the port. The kit doesn't come with this gasket, but if yours looks bad you should buy a new one.**

ed to the rear fender with 6mm bolts, nuts, and lock washers.

Now let's get into the handling of the Duster. There are a number of goodies available from Suzuki which will enable you to use more of this new-found power. First, you can increase the tension in the front forks by 20% if you install a different set of springs (part #51171-28700). These are available as an option.

The suspension on any motorcycle will change according to the weight of the rider, and his preference as to how he likes the machine to handle.

(Text continued on page 32)

**Aside from just being welded around the stinger, this section of the new chamber has also been "gusseted," lessening the chances of cracking in this area.**





# The "End Does"



## An All-Girls Motorcycle Club, And The Male Sex Is Responsible For It

Somewhere way back when, somebody was quoted as saying "Behind every great man there is a woman," or something to that effect anyway. Today, however, if this person were to attend some of the local motorcycle events held in Southern California, he might be prone to add "and behind some women you're liable to find a man or two" as there's a good chance he would have seen the powder-blue colors of a club called the "End Does" leading a number of the weekend warriors around the track. Aside from the club's name, he would also have noticed that their emblem didn't seem to fit in with those of the other clubs that were there. And, unless they really have a big problem, men don't have bodies like these riders. A quick check in the pit area would have revealed that, no, this wasn't part of the 'gay' liberation, but rather a movement of sorts by a group of women seeking liberation.

Just recently, we attended one of the "End Does" meetings, and while I felt somewhat like the lamb just before he was offered as a sacrifice, their meeting did prove to be interesting.

At the present time there are fourteen broads—whoops, ladies, who are active members in the "End Does M.C.," and a number of other members who are on the "inactive" roll of the club's roster. The biggest thing these girls have in common is that all of them just plain 'dig' riding bikes.

Originally, in October of 1968, the End Does were formed as a girls desert racing club by a group who were the wives of members in the "Rams M.C.," a men's desert racing club in Southern California. There were a number of the wives that wanted to participate in the races, but according to the Rams' by-laws they were prohibited from wearing the club's colors. So, not to be denied, eight of the girls got together and started the End Does.

Since that time their activities have become much more diversified as new members joined, and older ones dropped out. Now, they compete in moto cross, desert racing, TT racing, European scrambles and about any other form of motorcycle competition you can think of. In 1970, the End Does became an AMA chartered club in District 37, and their membership is open to anybody, that is providing you meet the physical necessities to be qualified as a female.

Now you probably might be wondering what type of girl would 'dig' bike riding enough to join a club like the End Does. Well, there's no special "type." As far as occupations, their membership list runs the gamut from a topless dancer to a junior high school music teacher. The two youngest girls in the club are 17 years old, and the oldest any of them would admit to was 39 years old. There's no stereotype as you might have expected.

Let's look at the Secretary of the End Does, Gini Kesler. When she isn't out riding her Hodaka, you can usually find her teaching music at a junior high school in Long Beach. It was Gini's husband Don who first got her interested in bike riding aboard his 500cc Triumph a little over two years ago. Aside from teaching and bike riding, Gini also likes to knit, plus she and her husband raise miniature Schnauzers.

Sandi Terry has been racing bikes about 4 years, and for the last 1½ years she had worn the End Does colors during her racing activities. Sandi gets just about as much fun taking her two oldest boys Ricky, age 9, and 7-year-old Ronny out where they race in the mini-enduro class, as she has racing herself. It won't be too long before 6 week-old Randy, finds a Briggs & Stratton nestled in his Tyke Bike. Fortunately, there have been few injuries during the club's existence, but of these mishaps Sandi has the distinction of having had the worst of them. During the 1969 Hopetown Grand Prix, Sandi was laid up for 6 months with a broken arm that couldn't be put in a cast, along with some other minor injuries. But that hasn't seemed to slow her up as she's back out there running harder than ever.

All but one of the girls have their own machines which fall in the 125cc class or nuder as this is the limitation placed on women by the AMA. Believe





**Maxine Smith shows that girls are more than "sugar and spice" as she dials it on aboard her '71 Suzuki during a recent moto-cross event at Indian Dunes.**

it or not, the girls' biggest supporters are their husbands, and in most instances they are the ones responsible for buying the girls their machines. But there are a couple of girls who have bought their bikes with their own hard earned money.

Jeanne Allen, a cute little bit of femininity who is currently the President of the End Does, purchased her own Bultaco Sherpa S100. Jeanne is partially sponsored by Steve's Bultaco in Van Nuys, and maybe by the time she's ready for a new bike she'll have married her fiance Tony Nancy. Tony is certainly no newcomer to racing, having been a prominent drag racing



**Jeanne Allen, President of the End Does, has been riding for the last 8 years. Jeanne, works as an editorial assistant for Hot Rod Industry News, and she is another one of the girls who bought her own scooter.**

figure for many years, and we think he will fall prey to Jeanne's big blue eyes the next time she wants a new bike.

The End Does Vice-President, Karen Traw, is another one of the girls that purchased her own machine. Steve's Bultaco in Van Nuys, gives Karen a helping hand with her 100cc Bultaco, but she handles most of the maintenance and minor repairs herself as do many of the girls. On weekends when she isn't out 'getting it on' with her Bultaco you might look up to the sky, and if you see a pretty blonde floating around the heavens it just might be Karen. Aside from being a senior in sociology, riding bikes, and scuba diving, she gets turned on over sky-diving as well. Maybe that explains why such a pretty girl is still single, there aren't very many fellows I know that could keep up with her, but it would sure be fun trying.

Sandi Ruddy is one of the original charter members of the End Does, and this year she is also Treasurer for the club. Of all the girls in the club you would think Sandi would have the really 'hot set up,' since her husband Tom, works for Hercules preparing Puch race bikes. Well, that 'tain't right, Sandi is the only one who doesn't have a machine of her own. Sandi, and her husband, started racing mini-bikes back in 1961. Then, towards the end of 1962, they moved up to motorcycles. Tom gave Sandi a new bike for a Christmas present, but that was back in 1963, when she was 6 months pregnant with the second of her three girls. She couldn't ride for 4 months, and since then the bike has disappeared.

The high point leader of the End Does is Kathy Anglin. Last year, Kathy entered approximately 40 races garnering enough points with her '70 Sachs to lead the rest of the club in

**She really likes to 'get it on,' and according to Karen she "cannot give it up." Karen Traw, a sociology senior at San Fernando Valley State College, bought her own machine and handles most of the repair work herself.**



**Sandi Terry (on the right), and Mary Harnisch, are two of the End Does that go in for moto cross racing. Sandi has been riding for 6 years, and Mary has been at it for the last 5½ years.**



**Claudia Dunning likes to get out of the normal routine of housework and shopping, she doesn't look like she's on her way to the market here. We bet her husband Don got stuck eating TV dinners again.**

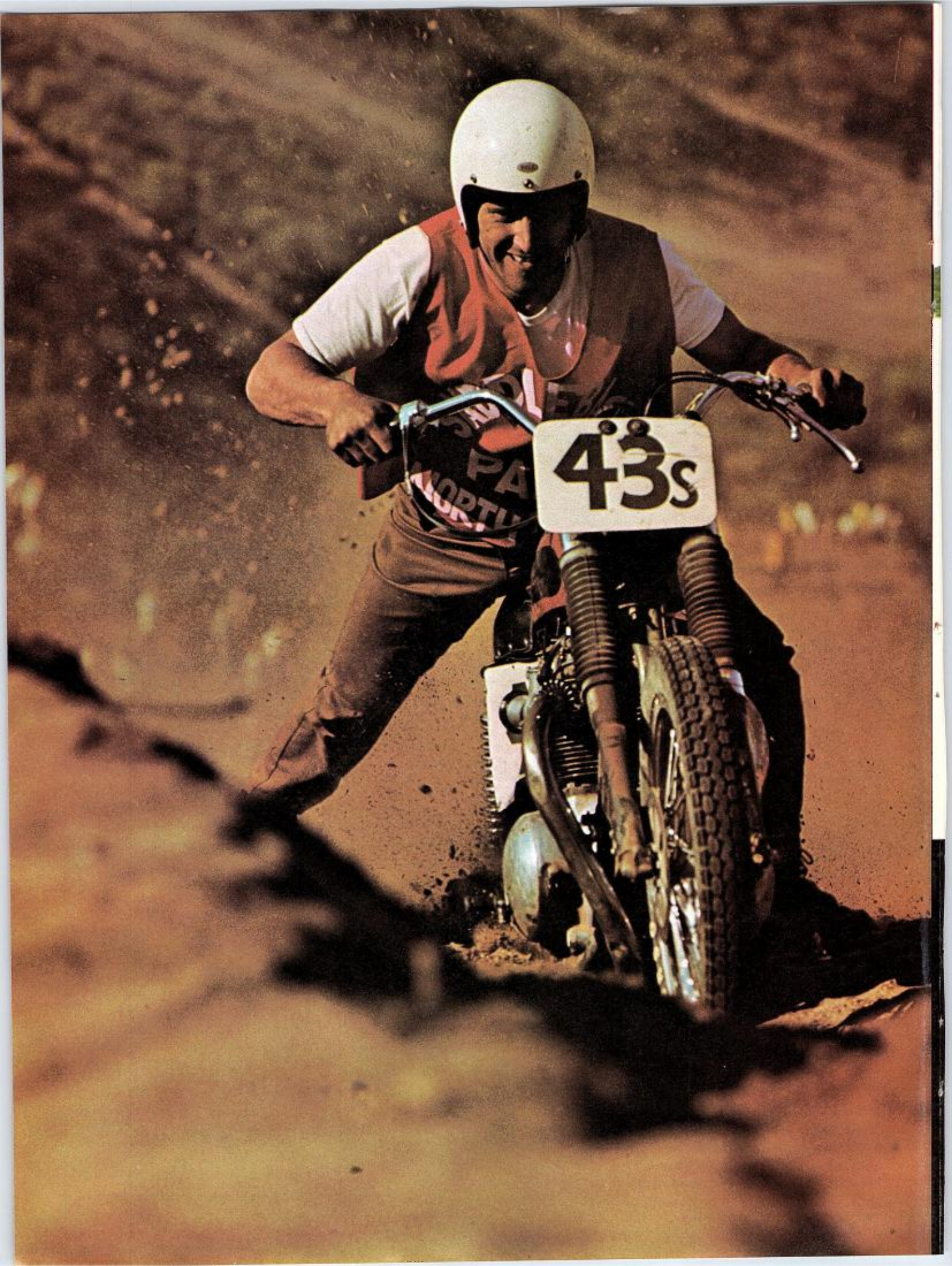
points. Kathy, who works as a payroll clerk, likes all kinds of outdoor sports and she is another one that has tried sky-diving and likes it.

As we mentioned, there is no stereotype girl bike rider. Joyce Soya, another member of the End Does is a nurse. She and her husband started riding about 8 months ago, and now Joyce has graduated to a Rickman-Zundapp which was a surprise Easter present from her husband, Ron. Joyce is partially sponsored by Kolbe Honda in Woodland Hills.

During the day you can find Mary Harnisch selling motorcycle parts behind the counter of International Yamaha in Canoga Park, but on the weekends she's out charging around

(Text continued on page 46)







# North vs. South for hillclimb honors. MEETING AT THE MATTERHORN

report by Eric Raits    photos by Dave Gooley



California's North-South rivalry continued in a hot hillclimb confrontation at Saddleback Park Easter Sunday. The Orange County riding area hosted top climbers from the western states in a meet with a little of everything.

The stretched wheelbase Harleys were in attendance, a pair of girl riders showed up and a contingent of hill-climbing Kawasaki Mach III's from Bakersville caused a lot of talk among the two thousand spectators.

The mini's and 100's crept about two-thirds up the soft part of the trail in a preliminary to the excitement. The crowd woke up when attractive Alice Hudnall churned her 125 Yamaha in a bee line through the soft stuff and over a jump which was a barrier

to many machines all day. She held the high mark for a gratifying length of time. The people whistled and cheered and Alice stood on an escape road, hands on hips, pleased and daring any of the other's 125's to beat her mark. Only one did, a Penton ridden by Chris Jackson. These two beat several of the 250's.

The 250's attacked next. They flipped and fell and rolled until Manual Ponti III torqued his Bultaco over the top.

The 360's had more than enough power to make it but reached speeds that demanded plenty of care in selecting a path over the top.

While these events were going on, the bike riders were walking the





**The Kawasaki contingent from Bakersfield put in a game try but couldn't scale the Matterhorn on the wailing Mach III's.**

## North vs. South

course, peering and pointing at the routes they hoped would bring them over.

Chuck "Feets" Minert, long, long time BSA rider, and campaigner in just about all types of motorcycle racing, made it over on his Victor just like everybody knew he could. He looked like the instructor at a hillclimbing school, making perfect approaches to the slope, hitting the jump just right, downshifting in the air and calmly putting over the top. His fluent style probably made scores of spectators wish they had entered the event, he made it look so easy.

The big bikes took turns at bombing up the hill. They all had adequate power but some were not equipped with the right suspension and got out of shape over the jump.

The Mach III's put on a good show, weaving and spinning in the dust at the foot of the hill as their pilots tried to control the high-revving machines. They easily made it to the bump but looked like a horseman who has just bitten his wild pony on the ear when they hit the protrusion. Revs died down and it was back to Bakersfield for more work.

The big hillclimbers in the open class got up to speeds that would be illegal in any state but Nevada as they made it easily for the most part. Bill Harrison was the winner in this class.

The North-South feature event pitted teams of four riders each riding alternately. Total footage up the hill would determine the cash winners. North and South swapped leads furiously with nearly every ride and the last climber gave the win to the South by a margin of a few feet.

Frank Durso, captain of the North team, took overall honors in a runoff at the end of the day. Everyone who had made it over was moved to staging areas closer and closer to the hill's slope until they couldn't get enough of a run to make it over. Durso wasn't deterred by even the last staging area, Sunday-riding it up and over. Manual Ponti was eliminated late in the competition, coaxing a superlative performance from his Bultaco.

### Results:

60-70cc

Todd Peterson

HONDA

90-100cc



**Chuck Minert made the Matterhorn climb look simple. The organizers should have made him climb sitting backwards or something.**

**The bigger bikes were the most spectacular. A lot of expensive ma-**



**The terraced hillside was a perfect vantage point for a close up of hill-climbing action.**

Rick Sandberg	SUZUKI
125cc	
Chris Jackson	PENTON
250cc	
Manuel Ponte III	BULTACO
360cc	
Doug Hall	BULTACO
400-500cc	
Chuck Minert	BSA
650-750cc	
Frank Durso	BSA
Open	
Bill Harrison	H-D
Overall	
Frank Durso	BSA

**chinery tumbled down the Matterhorn on Easter Sunday.**







W. C. Fields once said something  
about taking the bull by the tail.



# BRONCCO

## SURE-FOOTED TRAIL BIKE



The BRONCCO Apache 100 goes as good as it looks. 2-cycle engine, 12 hp at 7,500 rpm. gets on the cam at 2,500 rpm, redlines at 8,000 rpm. 22mm Dell'Orto concentric carb and 4-speed manual trans. Ceriani-type suspension with 19" Pirelli front knobby and 17" Pirelli rear knobby. 12" ground clearance. Heavy-duty front and rear drum brakes, skid plate, chain Top speed 65 mph. 145 lbs. Chrome Yellow with hi-rise polished stainless steel fenders and black accents.

APACHE 100

Send 50¢ for BRONCCO decal & literature. Dealer & distributor inquiries invited.

**BRONCCO DIVISION / ENGINE SPECIALTIES, INC.**

Dept. MC-8-71 P.O. Box 260, Cornwells Heights, Pa. 19020

## Hop up

You may find that due to some of the other changes the rear suspension can't seem to break the laxative habit as all this new "good stuff" has done nothing except dump you on your head with more regularity than before. Generally, a change in rear shocks will help an ailing rear suspension unit. If this is your problem, part #62100-28700 might provide the cure. This part number relates to some optional rear shocks that are available for the Duster. These shocks are five-way adjustable, and offer close to a 1/4-inch more travel than the stock Duster shocks. The stock units are fitted with a regular pitch-wound spring, while the optional shocks utilize an irregular-pitched spring to increase their "rating," and provide greater travel.

Using these shocks presents a slight clearance problem between the rear sprocket and the shock itself, but only on the left side. This is easily overcome, however, by fitting two 12mm flat washers on the inside of both the upper and lower ends of the left shock before bolting it on. And, just in case you happen to be the purist type who

(Text continued on page 40)



# subscribe

to Modern Cycle Magazine

# TARABUSI, S/A



THE PISTON IS THE "HEART" OF THE ENGINE DON'T SETTLE FOR LESS THAN TARABUSI QUALITY.



Racing pistons complete with rings, pin, circlips. Pistons available standard, 1st, 2nd, 3rd, 4th oversize. Liners, rings, pins, circlips available separately.

	SUGG. LIST PRICE
200cc Bultaco Sherpa	\$15.00
250cc Bultaco Matador	15.50
250cc Bultaco Pursang	15.50
360cc Bultaco Bandido	19.50
250cc Montesa Capra	15.50
360cc Montesa Capra	19.50

	SUGG. LIST PRICE
125cc Maico Scrambler	\$16.00
250cc Maico Scrambler T5	22.00
360cc Maico Scrambler	28.00
250cc Husqvarna	22.00
360cc Husqvarna	28.00
405cc Husqvarna	32.00

### DISTRIBUTORS

**MOTO X SALES**  
4926 Hillside Road  
Independence, Ohio  
(216) 524-7763  
Ohio, Ky., Tenn., N & S Carolina

**SHADCO HONDA**  
2305 E. 10th Street  
Sioux Falls, S. Dakota  
(605) 336-3238  
Midwestern States

**PERFORMANCE PRODUCTS**  
4270 North Dixie Hwy.  
Pompano Beach, Florida  
(305) 942-6922  
Southern States

**ACCESSORIES & CYCLES UNLIMITED**  
713 West Bethany Home Rd.  
Phoenix, Arizona  
(602) 263-9168  
Western States

**GENE SHILLINGFORD & SONS, INC.**  
Green Lane & Radcliffe Street  
Bristol, Pennsylvania  
(215) 788-7878  
NEW ENGLAND'S EASTERN STATES

**HOFFY'S SERVICE**  
1249 First Street  
Huntington, Indiana  
(219) 356-3328  
Mich., Ind., Ill., Wisc., Mo.

**GRAY INT. INC., IMPORTER GEN. DIST., 4461 W. Jefferson Ave., Detroit, Michigan**



# The Honda Motosport 70.

## A big bike in everything but size.



Definitely not a mini bike! Purposely not a full-sized motorcycle! But finally a bike that's perfect for both fathers and sons—the new Honda Motosport 70.

### **Rough Ready.**

Honda dirt machines have always been known for their dependability... and the SL-70's no exception. It has a rugged "Dynamic V" frame just like its big brothers. Long travel front forks. Hydraulic dampening suspension in the rear. And a tight little four-stroke 70 cc overhead cam engine that packs a more powerful punch than other bikes in its class — 5 big horses.

The tires are designed for the dirt, too. Knobbies, of course. And the front's larger than the rear for better handling.

### **The Big Shift.**

Shifting the Motosport 70 isn't kid's stuff. The 4-3-2-N-1 transmission copies the larger Motosports not only in the way it shifts, but in the way it can take a beating.

A couple of other big bike features mean safety for both the rider and the environment. The handy ignition cut-off switch lets you kill the engine instantly. And the USDA-approved

spark arrestor/muffler keeps the countryside green... and quiet.

### **All Out Styling.**

Take a close look at the SL-70 and see if you can tell it apart from the other Motosports in the Honda line. Styling sure won't give it away. Rich, bright colors. Distinctive lettering. Deeply padded contoured seat.

Raised steel fenders.

And catch the lighting equipment. It's removable for real rough riding. But always there so you can license the 70 for the road.

The Motosport 70 is at your Honda dealer's now. Drop by and see how small it is. Ride it and find out how big it is.

## **From Mighty to Mini, Honda has it all.**

Always ride safely. Wear a helmet and observe all rules of the road. For a free color brochure, write: American Honda Motor Co., Inc., Dept. GG, Box 50, Gardena, California 90247.

© 1971 American Honda Motor Co., Inc.





# PENTON

## SPORTCYCLES

"Built for Champions"

### NUMBER



## FIRST 125cc IN NATIONAL ENDURO STANDINGS

Ray Kussmaul of Michigan rode his 125cc Penton Six-Day into 10th place overall in the 1970 National Enduro point standings to make his Penton the #1 125cc machine in National Enduros.

Once again the machine designed by America's most well known and famous Enduro rider, John Penton, takes all the big wins.

Penton Six-Day machines also finished 2nd, 3rd and 4th in 125cc National placings. Every motorcycle ahead of the Penton was of 250cc displacement or greater.

Isn't it time you looked at a motorcycle that does what it was designed to do and does it impressively? See your Penton dealer today or write us for a new brochure and your nearest Penton dealer.



PENTON IMPORTS  
1354 Colorado Ave., Lorain, Ohio  
PENTON CENTRAL  
209 E. Johnson St., Amarillo, Texas  
PENTON WEST  
2150 S. Santa Fe St., Santa Ana, Cal.

## Tips from the TROOPS

Gentlemen:

I have a suggestion for those of you who have two-strokes with a compression release. If your bike is cutting out on long hauls. First look to see if there is oil around the compression release head, if there is, here is the solution. Try putting an ordinary spark plug washer between the release head and the cylinder head.

And for you moto cross riders do like the Suzuki moto cross riders do and put some fiberglass strips on the fork legs to protect them from rocks and other flying objects, that will crack and damage them.

Jim Branstetter  
Livermore, Ca.

Dear Troops,

I have discovered that nipples for cables break or strip out. With a spark plug cap you can make one. First drill a small hole in the middle of the cap. Then just put 2 small screws in each side.

Rod Danziger  
Warren, N.J.

Dear Troops,

I have discovered that the balls on the ends of cables break. Well, I've found a way to fix them. First you get out a torch, some solder, flux, the cable, and a 5/8 or 1/2 inch nut, depending on the size of the ball needed. First dip the cable in some flux. Then you fill the nut with solder. Next put the cable in the nut filled with solder. Hold the cable straight up until it hardens, put the nut with the cable in it in a vise. Cut 4 equal cuts in the nut and with a screwdriver pry the nut pieces off. Finally grind the ball to the size needed.

Rod Danziger  
Warren, N.J.

Troops:

To keep up the good looking appearance of that fiberglass gas tank or other fiberglass components, use a metal file to slightly round off the

sharp edges that the factory leaves on the perimeter of the tank. Take the time to file slowly and evenly. This should also be done for any bolt holes. If you do a good job, this will prevent the paint from chipping when removing the cylinder head or spark plug. Apply a small amount of wax to the filled edge to bring back the original color.

Bruce Stjernstrom  
Mankato, Minn.

If any of you have ever had a cracked battery on your bike, you know how expensive and maybe messy it can be. Don't buy a new battery, keep your hard earned cash. Here's what you do. First get a soldering iron, now, melt the plastic around and on the crack, really get it gooey, and let it dry. I've done it many times and it really works. Try it.

Yours truly,  
Jeff McGeary  
Seattle, Wash.

Dear Troops,

Here's a small tip that many dirt riders might want to use. If you ride a 2 stroker you know how frustrating it is when you're in the middle of nowhere and your spark plug fouls. So you open your tool box and remember that you left your spare spark plugs out because you didn't have any room. Well here is a solution to this problem; Get a short piece of rubber hose small enough to screw the end of a plug into. Put a plug in each end and hook it to a down tube with two hose clamps. The hose also protects the firing point of the spark plug from dirt, water, and the elements.

You have a great magazine. Thanks for ten months of great reading.

Yours truly,  
Steve Herhager  
New Boston, Mich.



In November of 1970, the motorcycling press was invited to LaQuinta, California, to view the new offering from the BSA importers. LaQuinta, more a country club than an actual community, is located about 20 miles south of Palm Springs, California. Those of us attending the introduction were the guests of BSA Triumph for a full four days of activities. On the second day of the junket, we assembled in the desert a few miles from the country club to witness the unveiling of the new line of BSA's. One of the first machines to be uncovered was the BSA Victor Trail 250. The little bike gave us a good indication of things to come and it also showed that BSA had made some drastic changes in their design concepts.

The first changes to be noticed were the obvious ones. The nicely contoured alloy gas tank, the Ceriani-type forks and the conical hubs first attracted our attention. The white paint job on the frame next caught our eye. A closer examination of the frame disclosed that major tube members are used to carrying the lubricating oil for the engine. Basic styling of the machine is excellent, however, the overall effect is spoiled to

# THE BSA VICTOR 250 TRAIL

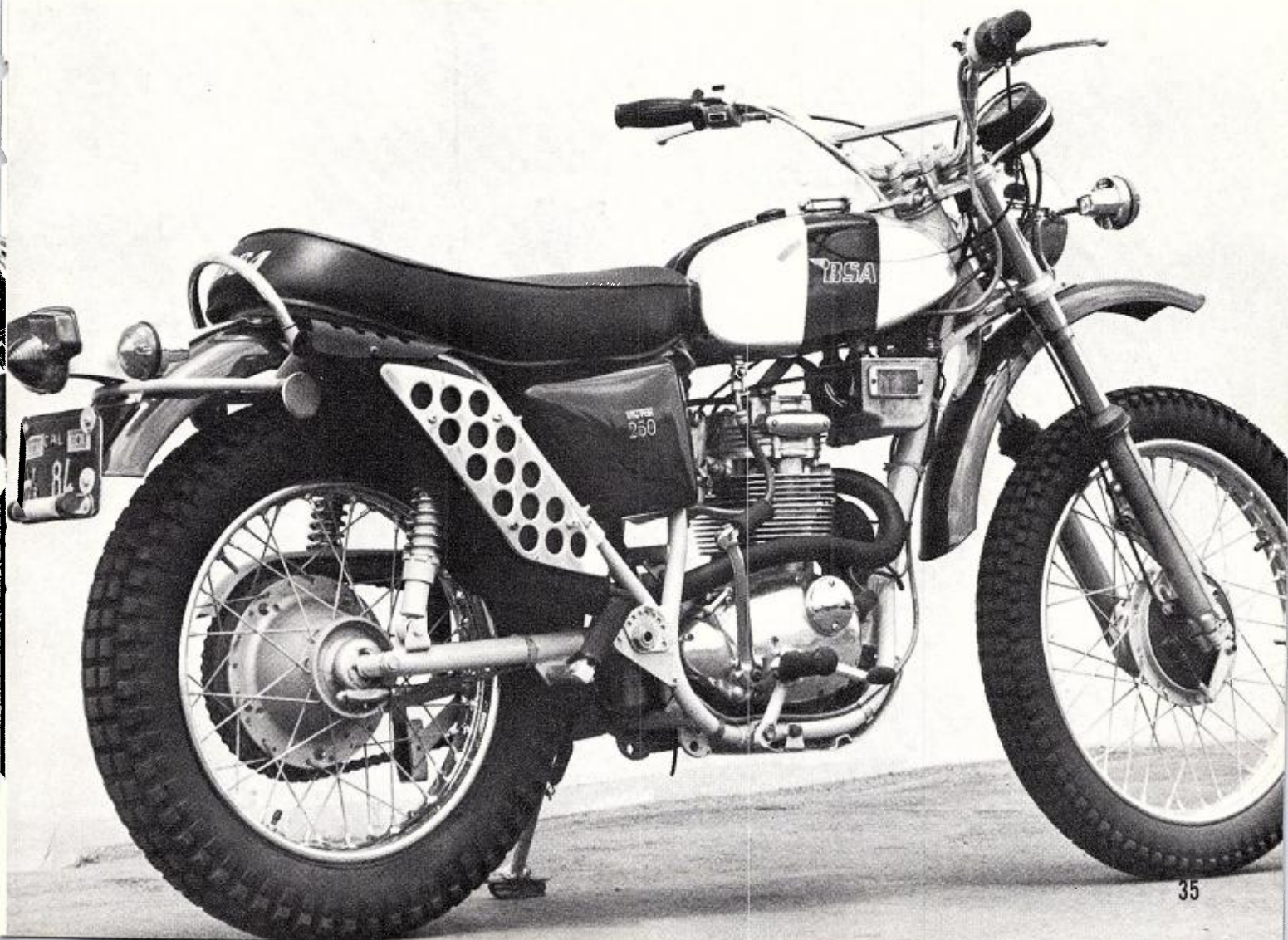
## A RACER IT'S NOT, A PLEASANT TRAIL BIKE IT IS.

a good degree by the bulky appearance of the directional signals, lights and instruments. (Glance at the accompanying photographs and imagine the bike stripped of the lights and the instruments and we think you'll agree that it is basically a very good looking machine.)

BSA refers to their new 250 as a Trail machine, we however, feel that the bike will appeal to the rider who wants a good medium displacement, around-town bike which can also be used for short excursions out in the dirt. As a Trail machine, the BSA Victor will appeal most to the rider who enjoys setting his own pace. The sort of man who enjoys the pleasures of solitary off-roading.

One of the features of the Victor 250

*Overall styling on the Victor Trail Machine is good, however, many of the smaller components appear to have been added as an after thought. Seating comfort is quite good and the aluminum gas tank carries a commendable 2.5 gallons of fuel.*









# BSA 250 VICTOR



**The lightweight telescopic front forks have internal springs and deliver 6.75 inches of travel. The 20 inch front wheel is laced to an aluminum alloy conical hub with ultra-light 6 inch diameter front brake.**

Trail which will appeal to both the pavement rider and the off-roader is the excellent suspension. BSA points out that the front forks are based on the units used on their factory moto cross racers. Most factories that support racing teams claim that various components proven in competition quickly appear on their bikes available to the public. We usually view such claims with a jaundiced eye since most racing equipment is prohibitively expensive. In any case, we were impressed with the forks on the BSA Victor. The forks are indeed lightweight, and they offer 6.75 inches of travel. The load bearing springs are carried within the stanchion tubes and the hydraulic damping units are mounted within the aluminum alloy sliders. Tapered roller bearings in the steering head reduce friction and the high-mounted front fender does a good job of locking down debris. Lock-to-lock movement is considerably shorter than we've become use to and the front end has a definite heavy feel about it. Since most of the major front end components are extremely light, we can only attribute the feeling of heft to the lightning equipment and instruments mounted on the upper fork legs.

Suspension at the rear of the bike is on a par with that at the front. Adjust-

able Girling dampers are standard equipment. The shock bodies are painted off-white to match the frame of the machine and the totally exposed load bearing springs are chrome plated. Girling shock absorbers have long been the standard by which other shocks are measured, as such they require little comment on our part. Considering the weight of the 250 Trail Victor (over 300 pounds with gas and oil), the suspension does a remarkable job. Actually, and depending on the price, the front forks would be worth the consideration of anyone interested in putting together a really super dirt bike.

Unsprung weight on the new BSA 250 is kept to a minimum through the use of aluminum alloy conical hubs. The front hub carries a single leading shoe brake measuring 6 inches in diameter, and the rear hub is fitted with a similar binder which measures 7 inches in diameter. As is obvious in the photographs, the brakes are mounted in very narrow drums. However, during our testing of the machine we found the stopping system to be more than adequate.

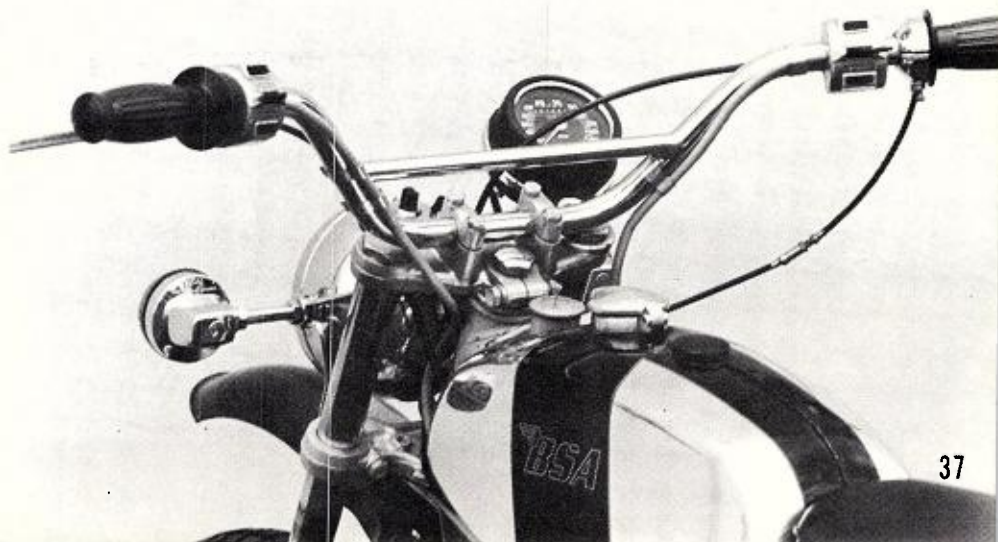
It seems that a 4.00 x 18 inch rear tire is required equipment on any machine currently produced. The BSA Trail Victor runs such a tire and it comes with a Trials Universal tread pattern. The tire at the front of the machine has a similar tread pattern and it measures 3.00 x 20 inches. The choice of rubber on the BSA 250 is an obvious compromise intended to complement the dual-purpose nature of the machine. The Trials Universal tread pattern is fine in the dirt, however, some caution should be exercised when riding on the pavement particularly if the streets are wet.

Certainly one of the most interesting innovations on the new edition of the Trail 250 is the oil bearing frame. In order to accommodate the proper amount of oil, the tubing used in the frame has been increased in diameter

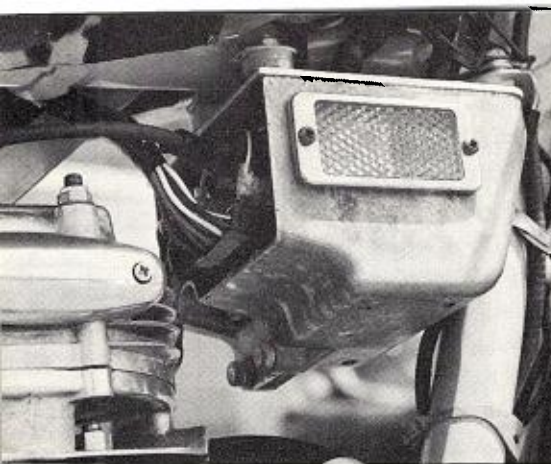


while a reduction in wall thickness has kept weight to acceptable limits. Essentially a single loop device, the frame features a large diameter back bone tube and a slightly smaller diameter front down tube. The oil filter cap is at the front of the back bone just aft of the steering head. The area around the steering head is well gusseted to keep things running in a straight line. Also an oil carrying member, the front down tube terminates at the front of the engine. A pair of smaller diameter tubes, welded to the front down tube, pass beneath, and cradle the engine and then curve upward to meet the aft end of the backbone.

The sub-frame consists of little more than the swinging arm, diagonal stringers, and a fender and seat supporting upper loop. Chain tension and swinging arm alignment are maintained by a pair of perforated eccentric cam washers carried at the swinging arm pivot. With this method, extremely accurate adjustment is possible and once everything is cinched down, there's lit-







**Most major electrical components are housed in this alloy case suspended beneath the gas tank. Snap-together fasteners make removal of the various electrical components an easy matter.**

## 250 VICTOR TEST

the possibility of anything getting out of true.

Protection for the underside of the engine is provided by a lightweight crash plate which bolts directly to nuts welded to the frame. While we are not overly fond of white paint on motorcycle frames, we were impressed with the quality of workmanship evident on

the BSA Victor 250 tube work. The frame appears to be the same as that used on the BSA 500 MX Moto Cross racer. If such is the case, the frame on the 250 is definitely understressed.

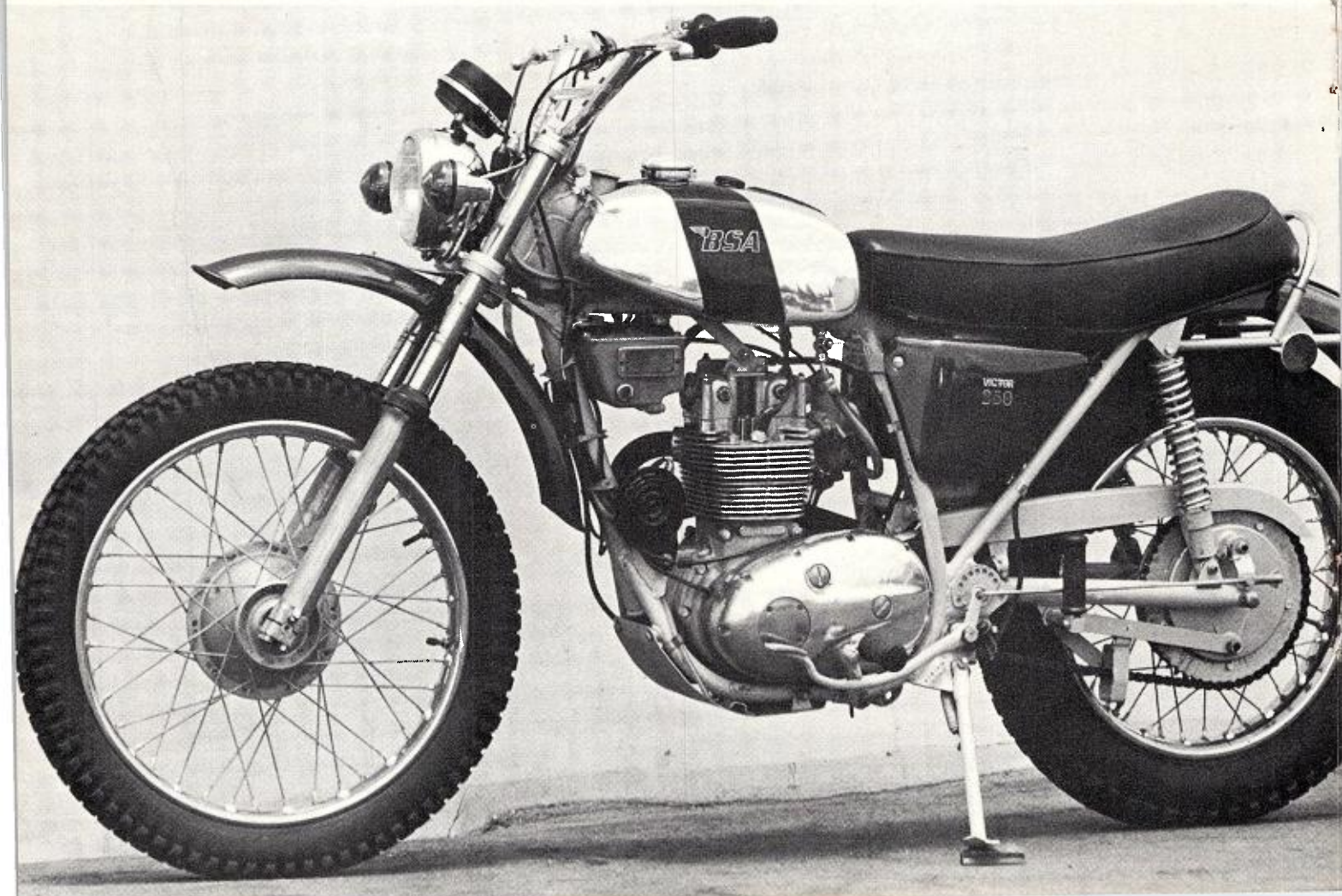
Externally, the engine in the 250 Victor Trail looks much like that used in earlier 250cc BSA's. Essentially, this statement is true, however, certain changes have been made in the interest of flexible torque and improved peak performance. A newly designed oil pump gives increased capacity and an easily reached external replaceable full-flow oil filter element provides extra engine protection. Basically, the powerplant is an overhead valve four-cycle engine. The single cylinder alloy barrel has a pressed-in iron liner, and the aluminum cylinder head has cast-in, heavy duty iron valve seats and removable valve guides. A special ((Low-Expansion" aluminum piston is fitted with one chrome plated plain compression ring, one tapered compression ring and a scraper ring. The latest BSA 250cc engine feature a newly designed connecting rod stiffened around the big end to give additional strength and reliability.

A forged steel one-piece crankshaft is fitted with a pair of flywheels which are held in place by four special bolts. Valve drive is taken off the right end of the crankshaft and the push rods pass

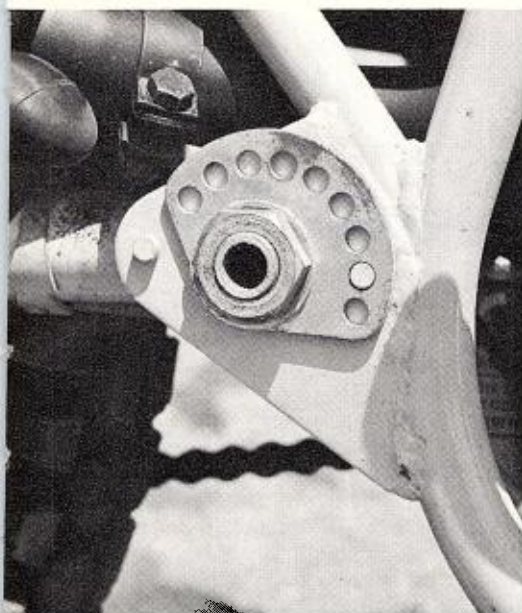
up through a tower cast in the cylinder. Primary drive between the crankshaft and the clutch assembly is by duplex chain carried on the left side of the engine. The clutch assembly has a built-in cushion intended to absorb shocks which might be transmitted to the drive train. Low gear in the four speed transmission is quite wide, while the remaining three speeds are rather widely spaced. Gear changes are made from the right side of the engine and the shift pattern is: down for low, then up for the remaining speeds.

The Bsa Victor Trail engine develops 22.5 horsepower at 8,250 rpm and compression ratio is 10:1. Internally, the bore is 67mm, stroke is 70mm, and total displacement is 247cc. A 28mm concentric bowl Amal carburetor feeds the gas/air mixture to the combustion chamber. The exhaust system on the machine is commendably quiet and blatantly noticeable. The head pipe curves above the engine cases and passes to the inside of the frame members. The muffler is a great squarish black box mounted high on the right side of the bike. A large chrome plated heat shield protects the passenger from burns.

From the standpoint of rider comfort, the BSA Victor Trail cannot be faulted. The well-padded, well-contoured saddle is fine for either solo riding







**Proper chain tension and swinging arm alignment is maintained by means of eccentric washers at the swinging arm pivot. The "lug in the hole" arrangement assures proper alignment.**

or packing double. The gas tank is quite narrow and when the rider is in the standing position, nothing protrudes to interfere with his grip on the machine. Folding, rubber covered foot pegs are supplied for both the rider and the passenger. Cross-braced moto cross handlebars are standard, as are the new light alloy control levers. The headlight, taillight and speedometer are all mounted in rubber to protect them from road shock and vibration. We have already indicated our dislike for the directional signals, but since they are probably the law of the land, they have to be lived with.



The Trail 250 is an easy starter, the gear box is smooth and fault free and acceleration is more than acceptable. With the exception of its semi-knobby tires, the 250 is almost ideal for city use. The bike is light enough to make weaving through heavy traffic a simple task. Muffling is excellent and the bike will do nothing to offend the uninformed bystander.

In order to be fair, we spent considerable off-road time on the machine. The more "dirt time" we put in, the



more we came to appreciate the Trail 250. The bike is certainly not a dirt racer but it is a very pleasant mount for getting from point A to point B over open or wooded land. At high speeds the weight of the machine adversely affects its handling, however, if speed is kept within certain limits, the bike is a very impressive performer. We doubt if the BSA Victor Trail 250 will interest the man who wants a single purpose off-road bike. However the machine does qualify as a true dual-purpose motorcycle. It is at home on the pavement and it performs well in the dirt. •



**The BSA 250 Victor engine produces 22.5 horsepower at 8,250 rpm. Bore is 67mm, stroke is 70mm, and total capacity is 247cc. The finish on the engine is quite good and the unit is oil-tight.**

Model	BSA TRAIL 250	Final Drive	CHAIN
Price As Tested	\$846.00	Starting System	KICK, FOLDING LEVER
Engine Type	OHV-4 CYCLE, SINGLE	Gear Ratios	1st: 19.48:1; 2nd: 12.06:1; 3rd: 9.14:1; 4th: 7.35:1
Bore	67mm	Top Speed	83.97 MPH
Stroke	70mm	Tire Size	FRONT: 3.00 x 20; REAR: 4.00 x 18
Displacement	247cc	Suspension	FRONT: TELESCOPIC FORK; REAR: SWINGING ARM
B.H.P. at R.P.M.	22.5 AT 8,250	Frame Type	TUBE STEEL, SINGLE LOOP
Compression Ratio	10:1	Weight	310 POUNDS
Carburetor	AMAL (28mm Concentric)	Wheelbase	54 INCHES
Ignition	BATTERY & COIL	Ground Clearance	7.5 INCHES
Fuel Capacity	2.5 GALLONS	Peg Height	9 INCHES
Lubricating System	DRY SUMP	Seat Height	32 INCHES
Clutch Type	WET, MULTI-DISC		

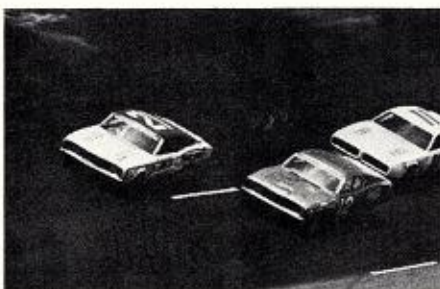




**Kel Carruthers — Winner**  
125 A.M.A. National RR Atlanta, Georgia



**Joel Robert — Winner**  
Swiss Grand Prix Switzerland



**Donnie Allison — Winner**  
NASCAR Grand Nationals Talladega, Alabama

## BELL HELMETS TOP THE WINNERS ON TWO CONTINENTS

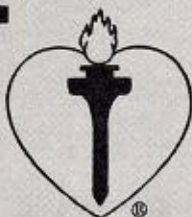
More professionals win with Bell Helmets than any other helmet in the world. Should you settle for less than professional head protection for your motorcycling or motorsport activities?



Insist on this mark on every helmet you buy



**GIVE...**  
so more will live  
**HEART  
FUND**



## Hop up

wants to keep his Duster all Suzuki, ask your dealer for part #08322-11128; this is the number for the genuine, bonifide, original Suzuki 12mm flat washers.

Finally, in regards to handling, there is only one other significant item available from Suzuki which can enhance man's control over the machine, and that is wheels. While they're not out right now, by the time you read this the factory should have released their new 21-inch front wheel for the Duster (available as an option).

The rim is made of steel, and measures 1.60 x 21. The rim itself carries part #55311-28700. And, the entire 21-inch front wheel assembly which includes drum, bearings, seals, spokes, nipples, rim, and protector is known by part #50000-28815.

However, when using the 21-inch front wheel, you will need to install a new fender brace to gain sufficient clearance between the tire and fender, unless you don't mind wasting the fender, tire, and maybe yourself when the forks bottom. The factory has a brace that was designed with the express purpose of saving you, and the machine, should this occur. And, you can dazzle the dealer even more with your wealth of knowledge about his stock numbers by asking for part #53210-28700 should you want this item.

A 2.75 x 21-inch tire can be mounted on the rim, but for better handling and stability we'd recommend a 3.00 x 21 tire be used. For hard riding, it might be wise to run a larger tire on the rear than the stock 3.25 x 18 which comes with the Duster. A 3.50 x 18-inch rear tire would be better suited in this situation. Also, to prevent the tires from slipping on the rim, you should install "lock bolts" on both rims. Suzuki has them listed as "Bead Stoppers," and a package containing 3-pcs. (two "Stoppers" for the rear wheel, and one for the front) can be obtained under the following numbers: 65270-30000 - Bead Stopper, 09159-08016-Bead Stopper Nut, and 08322-21088 Bead Stopper Washer.

Now you have all the ingredients you'll need to make your Duster an "outta sight" machine, and your Duster should be capable of "dusting off" most any bike in its class providing you are just as capable in the riding department. ●



# KAWASAKI'S ADVANCED ENGINEERING IS



**SUPERLUBE OIL PUMP** — driven directly by the crankshaft; feeds lubricant directly to the main bearings of the crankshaft and also sprays the correct amount of oil into the intake port where it is atomized by the fuel/air mixture from the carburetor and is injected directly into the engine. The correct amount is controlled by the throttle opening.



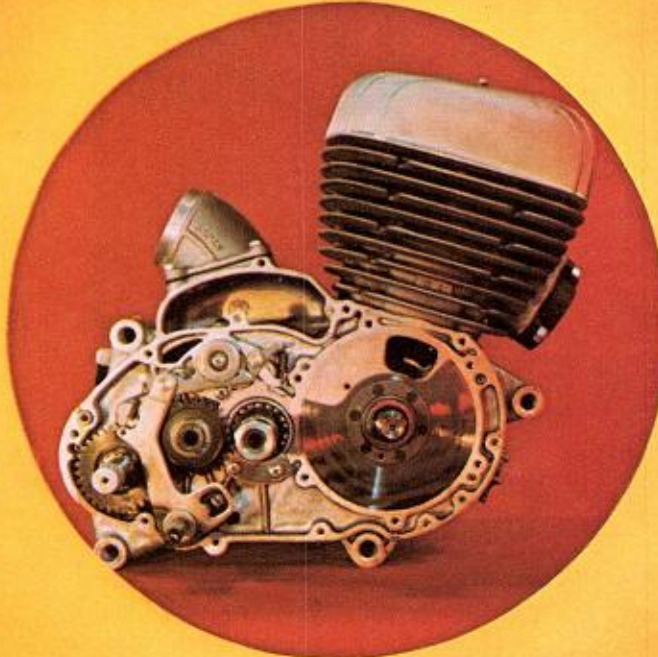
**5-SPEED CONSTANT MESH TRANSMISSION** — Most units can be started in any gear. Unnecessary to shift back to neutral to start. Straight tooth gears are precision matched to deliver maximum torque. No bushings are used on any of the shafts—all run on ball or needle bearings. Heavy duty bearings used throughout.



**MULTI-DISC WET TYPE CLUTCH** — Clutch gear and primary drive gear have straight teeth to prevent loss of power due to friction and backlash. Result: no loss of torque. Clutch is tailored specifically for the machine displacement. Ring springs between clutch plates prevent plate adhesion and make for positive clutch disengagement.



**EXTRA LARGE CARBURETOR** — (shown here with covers removed). With rotary disc valve engine the carburetor is totally enclosed within the cases where water or dust can't touch it. All connections to the carburetor are totally enclosed as well. Yet the main jets and idle adjustment can be changed from the outside, without removing carburetor cover, by removing the access plug. Carburetor has been tested and designed for the specific displacement of the engine.



**CAST ALLOY CYLINDER HEADS** — Aluminum alloy cylinder head is specially heat treated for wear resistance. Steel sleeves are cast into cylinder head for greater heat dissipation and elimination of hot spots. Modern 5-port design provides the best volumetric efficiency. Dual spark plug head allows carrying of auxiliary spark plug or immediate installation of a compression release without special machining.

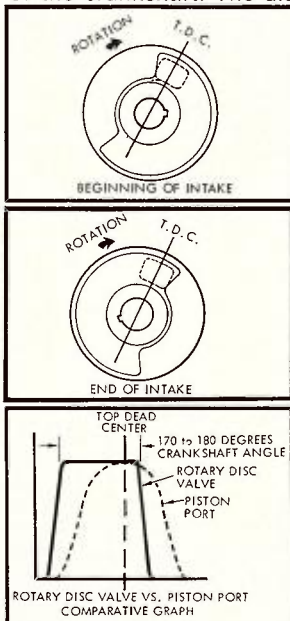
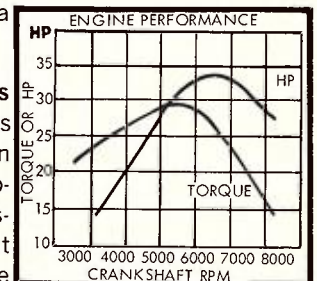
## THE ROTARY VALVE ENGINE!

**WHY THE ROTARY VALVE ENGINE IS THE TOP PERFORMER** — In the rotary disc valve engine, a disc valve is attached to the end of the crankshaft. The disc is cut away to permit positive fuel passage on the intake cycle for an extended duration. This means that fuel induction is timed by rotation of the crankshaft — not the piston. This provides precise, controlled intake metering of fuel admitted to the engine, and therefore increases volumetric efficiency. This creates a relative super-charging effect in the pressure created by the piston. By referring to the comparative graph below, note that fuel intake velocity climbs immediately to peak level and remains at this level for the entire intake cycle (170 to 180 degrees — 50 to 60 degrees longer than a conventional piston port engine). This results in no loss from blowback. Therefore, at low RPMs, when the most power is needed, this disc valve

permits a greater intake of fuel for a longer period of time.

### HIGHER TORQUE AT LOWER RPMs

—Torque is the force that produces rotary motion, and it is well known that a 2-cycle engine generally produces greater torque per cc of displacement than a 4-cycle engine. But one problem has always been the high RPMs required to produce the desired torque. Simply stated, the rotary disc valve design solves this problem. It pressurizes more fuel to the lower end, and this creates greater force when firing to establish greater torque. Take a look at the torque curve shown in this graph for the 350E. There is an astonishing 22.5 foot-pounds of torque at only 3,000 rpm, and a peak torque of 28.5 foot-pounds is achieved at only 5,000 rpm. There's visual proof of the superiority of Kawasaki's rotary disc valve engine.



THE MOTORCYCLE THAT ADVANCED ENGINEERING BUILT!

**Kawasaki**

1062 McGAW AVE. SANTA ANA, CALIF. 92705



## MBI CYCLE-TOURING BAG

the ultimate accessory!



Holds everything—second helmet, clothes, packages, gear. The waterproof carry-all for touring and shopping.

- Transparent map case.
- Fits any medium or large cycle.
- Foam padded bottom to protect tank.
- Harness leather straps.
- Keeps weight in center of cycle.
- Straps on and off in seconds.
- Can be used as a knapsack.

### Heavy-Duty Black Naugahyde

Deluxe 11½" W x 16" L x 9" H .. \$18.50  
(With zippered side pocket)

Regular 10" W x 15½" L x 9" H **\$15.50**

Contr. Residents 5% Sales Tax

Send Check or money order (No C.O.D.) to:

**MBI** Motorcycle Bags International  
P.O. Box 4171  
Stamford, Conn. 06907

## FLANDERS

### The Toolhouse of the motorcycle industry

Featuring  
only quality  
tool lines

**PROTO**  
Professional Tools

**challenger**  
Fine Tools

**Metric  
American  
& British**

All sizes  
available

**STAHLWILLE**

Dealers write on letterhead  
others send a dollar for catalog

**ALSO** Top Quality Metric & British  
**TAPS AND DIES**

Tuneup equipment & micrometers  
plus many more goodies!

**Flanders Dept. 3, Box 2297D  
Pasadena, Cal 91105**

# UPON THE PEGS



BY DAVE EKINS

## PREFACE

When this is read the Baja 500 will have been over. The stage will be set for the biggest off road race in North America, the Mexican 1000. Run annually on the first week of November since 1967 this classic has become the premier event of its kind. The following story is an insight of how the Mexican 1000 come into being, and the part motorcycles played in causing it to happen.

There is a part of the state of California that is unpopulated, un-spoiled, and yes, unpolluted. A piece of land nearly twice as long as Florida, half as wide, and like the Gator State surrounded on three sides by water. It juts into the Pacific Ocean like an accusing arthritic finger and creates a gulf known as the Sea of Cortez.

These waters flow free and clear nourishing an incredible amount of sea life. Great Grey whales swim down from Alaska to have their young in lagoons on the Pacific Coast and giant 200 pound Tortuava are caught with rod and reel in the Gulf. Marlin, Sailfish, and other great game fish of the sea are found in the turbulent waters just off the southern tip.

The rugged mountains that rise above the sea are sun drenched and parched.

Either covered with the black volcanic rocks that were once belched out from the bowels of the earth, or a fine dust which is the result of millions of years of wind and rain grinding down other bits of stone. The part of Baja that sticks out of the water sports only lizards, snakes, coyotes, and an occasional mountain goat. The only thing green may be an oasis of palm trees, or a slime on rocks partially submerged in a stagnant pool of water left by seasonal mid-summer rains.

This place is so forbidding that the 'Manifest Destiny' of the U.S. wanted no part of it. We let the Mexicans keep that part of California.

During the 16th and 17th century the Spaniards built a series of missions down the length of the peninsula and brought a new civilization to the people who were just barely scratching a livelihood from the earth and the surrounding sea. These missions were linked together by a path from Mission Loredo 100 miles north of the southern tip to Santa Cruz Mission, just south of San Francisco. A distance of nearly 2000 miles.

Within the borders of the United States this trail once used by missionaries is now buried under a wide concrete strip we call freeway. South of the border it's a different story. There's a crummy, ill-repaired black top road that runs about 70 miles from Tijuana to Ensenada. Then another 90 miles of two car wide black top that is a little newer and less full of pot holes.

From there south is a piece of dirt that even the good Padre's mules would have an awful time stumbling over. This is the footpath turned into motorcar road they call Mexico 1; it is also the Mexican 1000 race course.

During the 1950's a few American motorcycle riders used to sneak off down the Baja seeking adventure and fun. Two of them, taking several days made it all the way to La Paz. One thousand miles of riding in an area of no gas stations, no motels, no nothing. Most mission villages have been abandoned for years and are crumbling back into the earth from where they came. Some, like San Ignacio are thriving communities with few of the needed necessities to make life comfortable. (Believe it or not there is a Yamaha/Honda store in San Ignacio.

Bud Ekins, three time Big Bear winner and legendary 'Desert Fox' of the racing fraternity listened to these tales of dirt roads that never end, and the quaint fishing village of La Paz at the bottom.

But why be loaded down with a sleeping bag and camping equipment? Why not just start early one morning and not stop until you're there? The timing was right. Bud sold the idea to

(Text continued on page 50)





# THE SPRINGFIELD HALF MILE

## DIRT TRACK RACING GETS UNDER WAY AT THE CLARK COUNTY FAIR

Against the familiar Midwestern backdrop of 4-H exhibition halls, horse stables, livestock pens, and a midway completed with Ferris wheel and other rides, the 1971 Professional Half Mile season got under way once again. Easter Sunday at the Clark County Fairgrounds, in Springfield, Ohio, was a sunny 75 degrees, and hundreds of road riders were rolling in from every point of the compass. The several thousand Midwestern motorcycle enthusiasts who filled the grandstands and lined the first turn were enjoying the long awaited T-shirt day and having their own "Daytona" weather a lot closer to home there were many that were clad in the white garment. The first turn at the Springfield oval is a favorite with all the fans; the racers have other feelings about it.

Over the public address system, the AMA's answer to Johnny Cash



*Eventual winner Larry Palmgren, lines up for practice. Behind Larry is his younger brother, Denny.*

was singing "We Don't Wear Black Leather Jackets," as the track announcer explained that all of the fan's favorite riders were on hand, even if their favorite numbers weren't. And, the guy with number 32 who looks just like National Number 4, Bart Markel, really is Bart Markel . . . and so on.

One hundred and fifty novices came to race at Springfield, which required about sixteen heat races, transferring only the winners into the semi-main. In the Junior and Expert ranks, what the list of entrants lacked in length, it made up for in the strength of big name talent: Mansfield, Ohio's, Ronnie Rall, and Larry Darr; Flint, Michigan's, Markel and young Charlie Chapple; National Number 12, Larry Palmgren, from New Jersey, who was last year's half-mile point leader, Jack Warren, and last year's overall high point Junior champ, Rex Beau-



## SPRINGFIELD MILE



*Canadian star, Dave Sehl, relaxes in the pits before the main event. Dave finished fourth in the ten lap feature.*

champ, plus Canadian ace, Dave Sehl. The proven talents of top rank riders like these, combined with the guts up determination of all those Novices, promised to add up to a great day of racing.

The Expert Main Event was easily the highlight of the day, as Harley-Davidson mounted Dave Sehl, and Larry Darr, got into a four-way dice for first spot with Triumph riders Ronnie Rall, and Larry Palmgren; a dice that lasted throughout most of the ten lap feature race. In the early rounds, these four riders moved one by one past first lap leader, Ron Butler. It was Darr, charging hard on the inside line, who was first to take over the lead. Then, Dave Sehl, found that power sliding on the outside toward the top of the bank was the fastest way around. In the later laps, Sehl







started moving to the inside, and soon was racing wheel-to-wheel with Darr, Rall, and Palmgren, stayed with the outside groove, and between the four riders it was anybody's race.

For the mostpart, the Springfield oval is a "grooveless" track, and the fastest way around is often hard to find. With only two laps remaining, Larry Palmgren, found some useable traction out around the banking, and smoothly moved up for the win. Ronnie Rall had found enough of "Palmgren's groove" to get past Darr, and finish in the second spot. Fourth position went to Harley-Davidson mounted, Dave Sehl.

The following Sunday, Ronnie Rall came back to take the main event riding much like Palmgren had the week before. Rall, was fol-



lowed by Larry Darr, and Jack Warren. Where was Larry Palmgren? In Pennsylvania, winning the 18th Annual Billy Huber Memorial Race.

This giant gathering of Novices for the opening races of the 1971 Midwestern Flat Tracking season, says something about the staying power of this type of motorcycle racing and its ability to survive the recent storm of interest in moto cross competition that is sweeping over most parts of the country. Then again, this is where the dirt ovals are; every good size County

has a fairgrounds, and the heart of any fairgrounds is the big dirt oval. Usually they are a half-mile track that is often banked, and hopefully well kept in the face of everything from horse racing and tractor pulls, to Demolition Derbies and bad weather.

The Midwestern States are the heartland of flat track racing, and as long as county fairs continue to flourish anxious Novices will appear to test their skills on the smooth dirt ovals. ●

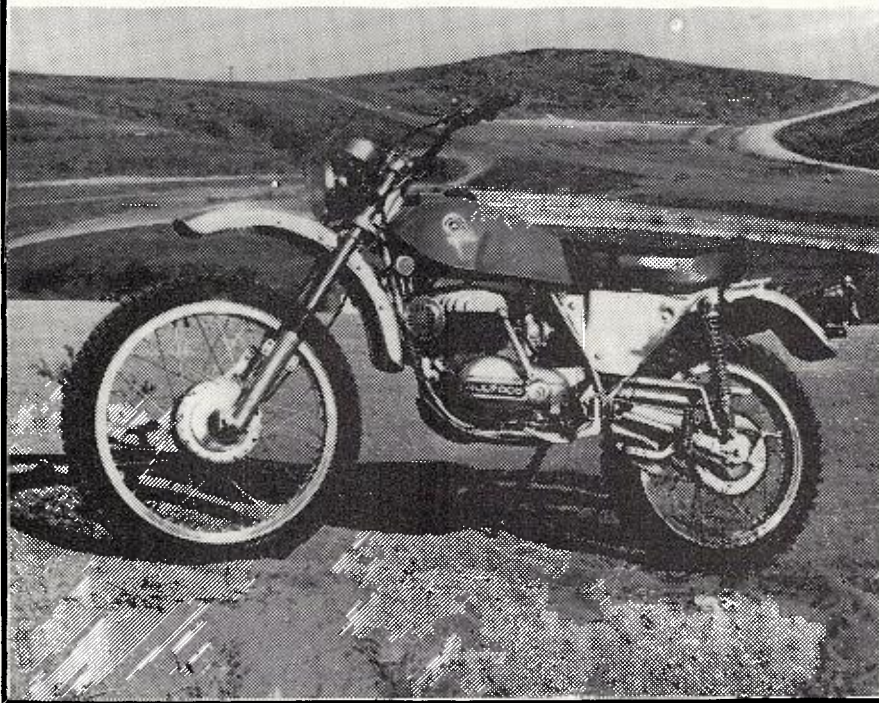
**Larry Darr (27), Larry Palmgren (12), and Dave Sehl (16) all go for the outside line in the main event.**





# THE ALL-ROUND ENDURO BIKE THAT COMES IN THREE SIZES - BULTACO FROM SPAIN

The term "Enduro" machine is a misleading one in today's market. Too many manufacturers seem to think that an Enduro bike is simply a street model with some minor styling changes and knobby tires! We at Bultaco don't think like that. We build three sizes of Enduro bike... the lightweight Lobito (125 and 175cc capacity), the middleweight Matador 250 and the big, burly 360cc Montadero. You don't need to be an Expert off-road racer to ride any of them and, as well as being completely street legal, all three are consistently proven winners in off-road events.



**YOUR  
COMMUNITY**

**...is a better place  
for you  
and your family  
because you give  
the United Way**



## GIRL RACERS



the course at the nearest moto-cross event. Her employer keeps the '70 Yamaha tuned, while Champion Helmets provides the sponsorship for Mary.

Maxine Smith is another one of the End Does that is out every weekend on her '71 Suzuki, looking for the nearest moto-cross competition. Her husband Neb, works for Suzuki of Van Nuys, and he is the one who convinced Maxine how much fun bike riding can be. Suzuki of Van Nuys sponsors Maxine, by supplying her with parts, Neb is the one who bought the machine for her.

So now you have an idea of the "type" of girl that might be apt to join a motorcycle club. It's a far cry from the image many people have envisioned, about the girl who looked like somebody put a fire out on her face with a chain, and just to keep in shape she would work as a part time bouncer at the local honky tonk.

The End Does are currently trying to organize a points system for girls in District #37. This would not only benefit them, but a couple of other girls clubs in the District as well.

Ernie and George, have given the girls some strong support as they try to see that there is a Powder Puff class, at all of the events they put on at Indian Dunes. However, at other events there has to be 6 girls entered to make a class, and if not, the girls are put in to compete with the men. This has created some bitter feelings at times between both sexes. So, another one of their projects is trying to see that there are more classes for women, especially in desert racing.

The End Does are planning a moto-cross event sometime in late September, or early October, which will probably take place at Indian Dunes. Along with all of their other projects, they also find time to actively support M.O.R.E., an organization in California that is trying to combat some of the legislation which affects bike riders in the state.

The End Does are for the most part, no different than any other motorcycle club that is comprised of men. Yet, one of their biggest problems is one which the men will never be faced with, and that is keeping their married members from becoming pregnant. Ah!!! Viva la Difference.



# Miss You.

Wish you'd come back. For all this, is yours.  
Sprawling garbage craters, to ride once more.  
Vile wasted mountains, and litter cemeteries.  
Riverbed junk gardens, and black fuming beaches.

Molten heaps, gently steaming,  
softly breeding final generations.

Where have you gone?

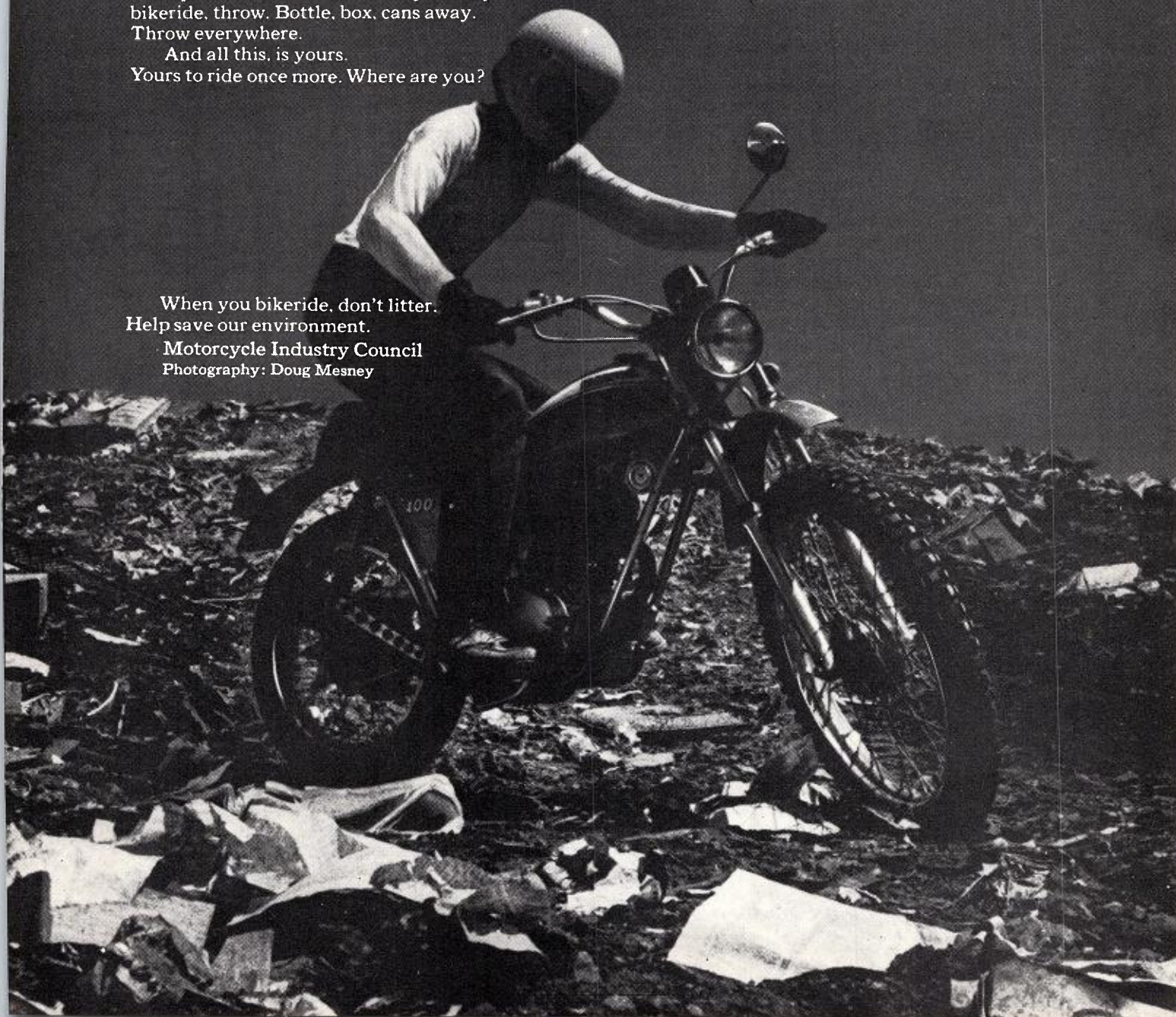
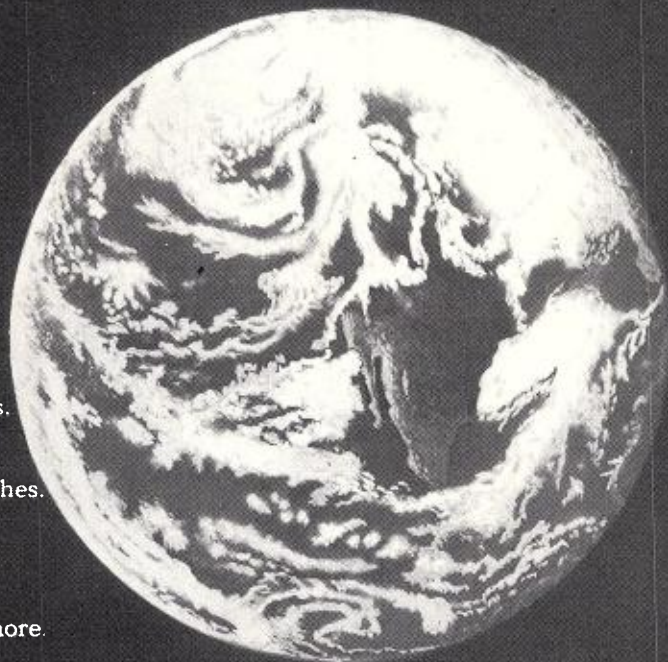
O return, come throw away your every whim.  
Your litter, your junk. O, throw it away once more.  
With passion. Throw, throw. Anywhere you  
bikeride, throw. Bottle, box, cans away.  
Throw everywhere.

And all this, is yours.  
Yours to ride once more. Where are you?

When you bikeride, don't litter.  
Help save our environment.

Motorcycle Industry Council

Photography: Doug Mesney





## Vari-shield™ the new look in face protection

The ILC VARI-SHIELD, an entirely new concept in design and face protection, is made of strong, distortion-free polycarbonate, 3/32" thick . . . helps eliminate fogging problems . . . slides up or down to any position and stays there . . . fits standard 3-snap helmets . . . and has a built-in sun visor. Available in clear, amber and smoke from your cycle dealer.

ILC INDUSTRIES, INC. / 350 PEAR STREET, DOVER, DELAWARE 19901

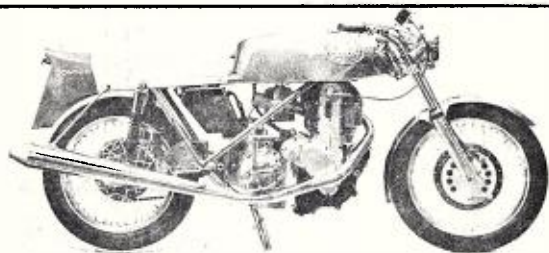


## the greatcrippler of young adults

SEND YOUR  
CONTRIBUTION  
TO . . .



TODAY!



## Announcing the CONDOR 500cc

the ultimate cafe racer

- Derived from the very successful Seeley 500 racer
- The 'Condor' has the degree of excellence found in grand prix racers
- Engine: G50 overhead camshaft, single cylinder, 500cc
- Gearbox: Seeley PGT 5 speeds
- Frame: Reynolds 531, nickel plated
- Wheels: twin drum electron hub, twin single leading shoe brake
- Gas tank: 3 1/2 gallons alloy — Oil capacity one gallon
- BHP: 49 at 6,500 rpm — Weight 310 lbs.

## ROSS-SEELEY RACING CO.

8 SOUTH STREET • MILFORD, NEW HAMPSHIRE 03055 • 603-673-3719

SOLE IMPORTERS OF SEELEY G-50 STREET MACHINES, SEELEY RACERS, AND FRAME KITS

### EXCLUSIVE SPARE PARTS in U.S.A.

For White 250cc & 125cc Cycles

Parts also for all models Horex, Pannonia, Danuvia, Heinkel, and Foreign Makes.

FOREIGN MOTORCYCLES CORP. Hickory 6-8452  
48-22 43rd Avenue • Long Island City 4, N. Y.

Extended Fork Tubes up to 12". Low as \$29.95. Also 4130 Chrome moly stock legs for Dirt Bikes!! American Made. Send \$1.00 for catalog! Dealers Invited.

EXPERT CYCLE

Expert Cycle

P.O. Box 1461

Reseda, Ca. 91335

(213) 886-5349



## LETTERS

Dear Sirs,

I was reading the Cheney Baja test in the May issue of Modern Cycle and I would like to know if the Cheney frame on page sixty-one will accept a Yamaha AT-1 engine. Could you please tell me the price of the Cheney Baja frame? You've got a great mag, keep up the good work. Thanks for your time.

Sincerely yours,  
Winston Fritwell

*As I recall, the text on the Cheney-Baja bike emphasizes that the frame was custom built to accept the H-D engine. The tubework would probably accept the AT-1 engine, but it would probably be necessary to weld in new engine mounting tabs. Then, of course, you would have to have the frame replated.*

*The Cheney-Baja frame alone would probably retail for about \$600. The complete Chassis, that's everything less engine, would probably cost in the neighborhood of \$1,100. —Ed.*

Gentlemen,

I have enjoyed reading your magazine, and wonder if you can inform me as to the overseas purchase of a new Triumph 650cc. Bonneville. I plan to be in England this summer, and would appreciate information regarding the purchase price and shipping costs to Port Everglades, Fort Lauderdale, Florida.

Sincerely,  
William H. Breese

*The information you require can be obtained by writing to Comerfords Limited, Thames Ditton, Southwest, London, England. —Ed.*

Dear Sirs,

In your road test of the Suzuki TM-400 your test rider appears to me to be Steve McQueen. If so, you could have at least mentioned his name somewhere in the article. I think he deserves recognition at least.

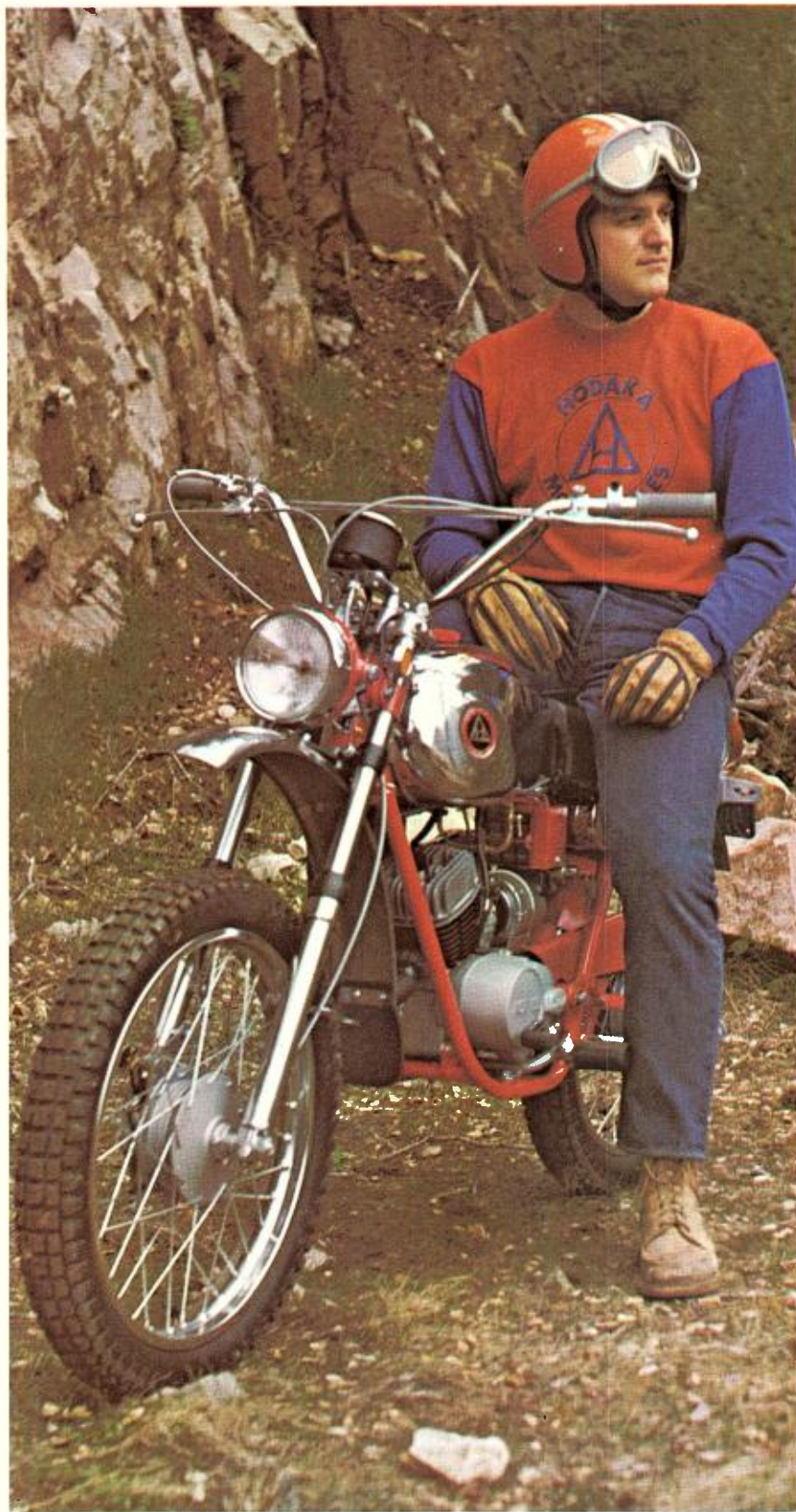
I also want to say that that issue (May) was one of the best I've read in a long time. Is it possible for you to do a road test on the OSSA 250 Stiletto 5 speed? Please answer.

Wayne Markwardt  
(Text continued on page 68)



# This is the Hodaka B+ B means *Better* . . . Plus means *More*

**Superb Handling, Balance and Suspension . . .  
With Quick Low-End Power Make Hodaka B+  
Your Best Buy. A Lasting Value.**



**E**VERY one of the improvements on Hodaka over the past seven years has a functional engineering PLUS in its evolution.

Hodaka's twin tube steel frame was, and still is years ahead of the competition.

The dependable Hodaka engine and strong, trouble-free **5-speed transmission**, gives you the unparalleled **PLUS** of reliability.

The **new, high front fender** adds a functional **PLUS**, and is one of the few changes that is visible in the basic Hodaka design.

The **new Cush-Hub** is an important **PLUS** in the power-to-ground linkage. Severe shocks from the all out assaults on rugged terrain are absorbed by the new hub.

Enduro riders will find the **new Trip-Set Odometer** another **PLUS**. It enables them to add or subtract tenths of a mile with quick ease.

**A brighter headlamp and larger brakes** make Hodaka B+ even safer.

The fine balance and superb handling make the rider and machine as one. You can concentrate on what's up ahead . . . not what's going on underneath.

The Hodaka B+ is still red and chrome. We only make a change for a good reason. A change must be an engineering advance . . . not a whim.

See and feel what we mean.

Head for your Hodaka dealer and find out more.

## HODAKA

For a copy of our booklet, "The Hodaka Story", send this coupon and 25c to: PABATCO, Box 327, Athena, Oregon 97813.

Name.....  
Street.....  
City.....  
State..... Zip.....

MC-8-71



MEMBER  
MOTORCYCLE  
INDUSTRY  
COUNCIL

Distributed in Canada by:  
GEMINI INDUSTRIES, Ltd., 2525 Stephens St., Vancouver, B.C.  
Designed and imported by PABATCO, Box 327, Athena, Oregon 97813



THE

# MERRILL MARAUDER®

A BOOT FOR THE SERIOUS RIDER  
CHECK THESE FEATURES...

MADE IN  
U.S.A.

Full 16  
inches high



- \* NO-SKUFF SHARKSKIN SHIFTER TOES!
- \* NO BEND STEEL ARCHES!!
- \* SOFT LEATHER LINED SHAFTS!
- \* BUILT IN ALUMINIZED HEAT DEFLECTORS!
- \* ARMORTRED DUPONT HYPALON 40 SOLES & NO CATCH BEVELED HEELS!
- \* SIZES 7-13 INCLUDING 1/2 SIZES C & E WIDTHS!!!

**\$50 PREPAID**  
ADD \$3  
FOR COD's

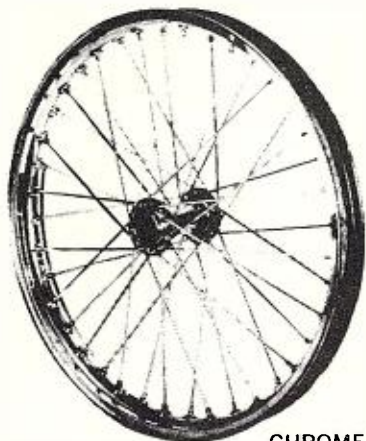
## CHESTER BOOT SHOP

43620 Van Dyke  
Sterling Heights, Mi 48078  
(313) 739-3323

**SPECIAL..**

**LIMITED TIME OFFER**

# WHEELS\*



CHROMED

**21" \$49.95**

16-19" ALSO AVAILABLE

\*Add \$10.00 for Tire & Tube

Custom Spool Hub with Bearings  
Chrome Spokes & Rim  
All Labor—Laced & Trued  
Dealer Inquiry Invited

## NORTH AMERICAN IMPORTS

2325 Cerro Gordo, P.O. Box N  
Mojave, Calif. 93501  
(805) 824-4261

## "Up On The Pegs"

Honda Motor Company that they should set a record from Tijuana to La Paz on the new Honda Scramblers. I had been working with the company on the development of the scrambler so it was decided Bud and I would make the run. An Ekins/Ekins record attempt.

My brother who had spent the last 10 years winning races on Triumph motorcycles asked Johnson Motors for permission to make the run on the rival Hondas. The short sighted importers of Triumph motorcycles replied with a flat 'No.' So there I was with a mission and no partner to ride with.

During this time the largest Honda dealer in the U.S. was Bill Robertson and Sons. The Robertsons had spent a lot of time flying in and out of Baja California hunting and fishing. Bill Robertson Jr. was doing some AMA racing in the desert and thought a 'little ride' with me might be some fun. And those are the circumstances under which I met the family.

On the first full moon of March in 1962 Bill Jr. and myself left the telegraph office at Tijuana. We had sent a telegram that read "Departing 10:01 A.M."

To say the least the ride was hairy, one of those adventures that keeps coming back and haunting you for a lifetime. We got lost during the blackness of night, crashed with the sun in our eyes, and at the end holed a piston in one of the bikes before we got to the other end. When we did make it to the other telegraph office 39 hours and 56 minutes had lapsed.

Honda got their full page advertising going, Argosy magazine ran a feature story on the ride, and Cycle World did a story. Bill Jr. and I sat back and waited for other adventuresome fools to have a go at our record. We knew it was easy to break and we wanted somebody to break it so we could have an excuse to get it back. We waited, and waited, and waited.

Four years later Bud decided he was going to give it a go. We had the Six Days Triumphs we had ridden in East Germany and on the Isle of Man. There was Bud, the fantastic Eddie Mulder, Cliff Coleman (a Gold Medal winner in East Germany), and me.

This time we started four hours before daybreak, the telegram was sent and we were on our way, with Eddie Mulder pulling wheelies thru the back streets of Tijuana. Feeling we were running too slow on the pavement to Ensenada I took the lead and stepped up the pace. I hit a grease slick and crashed, Bud and Eddie did the same. Cliff, yelling and screaming over the

noise of his screeching rear tire as only Cliff can told us we were going to damn fast. A really dumb way to begin the journey.

We went on, we had a flat tire, got lost, and even argued as to which was the best way to go. Cliff Coleman got tired of our company and started off on his own. Ekins, Mulder, and Ekins did get to La Paz and they did it a while SIX minutes faster than the Robertson/Ekins trip in '62.

That evening while having dinner at one of the seaside restaurants (We were no grubbier than the rest of the people) the conversation got around to our missing partner. Bud assured us Cliff would be along with the handlebars bent, the headlight looking up into the trees and Cliff shouting at us above the noise of his expired, rattling Triumph engine. And that's exactly the way he entered La Paz less than an hour later.

A little more advertising was done and some caught the eye of a Woodland Hills, California florist by the name of Ed Pearlman. Ed was a four wheel drive off road nut who had been competing in many small club mets. He knew he could break that dumb motorcycle record to La Paz. He had a 327 in a Toyota and two-thirds of the way down he was 6 hours ahead of the motorcycles' time. Then a U-bolt broke and that was that. Ed limped into a village and persuaded the local blacksmith to fashion another from some of the dead motorcars laying around. (Each village has its own small junkyard of cars that broke while trying to make the trip.)

With the village elders, the children, and the goats looking on the smithy did one very good job of forging a new U-bolt for Ed's Toyota. This stop over, the first chance Ed had to get close to the Mexican people is the reason we now have the National Off Road Racing Association and the Mexican 1000.

Of course the record has been broken and rebroken, but then it should have been. In '67 Ed Pearlman put together the first Mexican 1000 and it did run from Tijuana to La Paz. Sixty-seven cars and motorcycles entered and a dune buggy won it in 27 hours 40 minutes.

There was an Ekins/Ekins Triumph entered, and after a whole chapter of giggles we finished third. No teeth left on the rear sprocket, no oil in the rear shocks, several broken spokes, and the bushes in the forks had gauled in the sliders so the front end didn't work either. The 1000 will wear out a motorcycle.

(Text continued on page 56)



# PIERCE'S CHOPPER YOU WON'T FIND ANYWHERE LIKE IT

"BEAUTY IS ONLY SKIN DEEP," BUT NOT WITH THIS MACHINE.  
JIM'S SCOOTER REALLY GETS WITH THE PROGRAM AS WELL.

There's nobody that can really escape the strange urge which seems to come over us about this same time every year. Almost spontaneously, people erupt with an insatiable desire to get away from their 'scene,' and once again that great American rush for the outdoors has begun. Nobody is totally immune to this annual happening, and come summer everybody is stricken with this yearning. But now, more than ever, it is true there are "different strokes for different folks," and each person has their own "thing" they do to satisfy the allurements that come with summer.

There are some folks who have been stashing their coins since last summer, just waiting for the day they can say "to hell with it all," and "split" from the sweating 90 degree heat and hasseling people in the city. Then, for their two weeks of freedom away from the jungle which they call a vacation, they'll sit by the crowded pool at some plush Palm Springs resort in 116 degree heat. Yet, there are others whose idea of outdoors is a chair by an open window. Their two weeks are spent in front of a crap table in Las Vegas, blowing the hard earned bread they've saved all year. However, most bike nuts look at summer as a time when they

can do more riding, because of the longer days and warm nights. And if they do have a vacation planned, it is usually centered around their machine so that they can ride even more. This is their kind of freedom, and it turns them on more than anything else.

For some strange reason, a woman's resistance seems to weaken when summer comes. And many men have found that summer time offers the best excuse for buying those little goodies they've really wanted all year long, but haven't been able to con the "old lady" into letting them buy until now. For whatever the reason might be, summer is that time of year when the bike nut is in "heat," and he just has to get out and do his "thing." Some of them will even buy or build a new machine just for the occasion. Such is the case with this chopper that Jim Pierce has just completed which should be good for any occasion.

They say that "beauty is in the eye of the beholder," and after about 10 minutes of "beholding" Jim's creation, we have to say that this is one of the finest choppers we have ever seen. Many people also say that "beauty is only skin deep," but not with this scooter. Aside from its "outta site" appearance, Jim also wanted some of this same thing in performance. And the Harley "74" was quick to respond when Jim's plea came in the form of some exotic modifications which have made this "74" really "get with the program."





Anywhere you look on this machine, you'll find that Jim's workmanship is a real tribute to the long lost tradition of true craftsmanship which only comes through years of devotion. Jim is certainly no exception to this rule as this chopper is the end result of many oth-

ers which he has built through the years.

Jim chose to blend the old and new when he decided on a frame for his latest creation. The front part of the frame was taken from a Harley "74" of 1958 vintage, while the rear section was at one time part of a 1941 Hog. After

Jim had stretched the front legs of the frame 2½-inches, and the seat post became 1½-inches longer, he "raked" the steering neck about a half-inch. Once he was satisfied with the tube work, he moulded and filled the frame, which adds to the sexy appearance







**Jim chose to use the tanks and instrument panel from Harley's new 1971 Super-Glide.**

## H-D CUSTOM

Up in front are a set of '46 Harley springers which have been extended 12-inches. Then, to top the front end off, Jim has used shortened "pull back" handlebars, and a Bates 5-inch headlight, to show the way at night. The front wheel is a mixture of Dunlop's 21-inch steel rim, and a stock H-D hub with the brake removed. The rubber on the front is a 3.00 x 21, by Avon.

Then, looking at the end which is seen most often by anyone who has tried tangling with Jim's strong-running scooter, you'll find another strange

***This is the business end of the machine, and the one seen most by anybody that tangles with the 86 cubic inch beast. Aside from the good looks this scooter has some real go-power.***



**Jim made up the unique "sissy bar" and cobra-like seat frame seen on this machine.**



blending that makes this machine a good looker. The rear fender is actually what was once a front fender, belonging to a 1936 Harley. It has been cut and shortened, and fits right in with the scheme of things. The unique "sissy bar" was also created by Jim, and is constructed from half-inch round steel. Providing whoa power for the machine, the 16-inch rear wheel also utilizes the '69 Harley juice brake set-up to slow down the 5-inches of rear rubber on the ground.

This potent chopper has a hearty appetite, and holding the feed for all the ponies are a pair of tanks which have just recently appeared on H-D's new 1971 Super-Glide model. The instruments on Jim's chopper were also bor-

rowed from Harley's latest offering.

While Jim capably handled all of the actual design and construction on his chopper, when it came time for the machine to be painted he backed off,

(Text continued on page 56)



***The '46 Hog springer front end has been extended 12 inches, and the steering neck is raked one-half inch. The short pull-back handlebars and Bates light add to the simple beauty of the front end.***



***The frame on Jim's chopper is a combination of a 1968 Harley "74" front section, mated to a 1941 Harley rear section. The front legs of the frame have been stretched***

***2½ inches, and the seat post is 1½ inches higher. This accounts for the clearance between the engine and tanks.***



# THE SUZUKI MOTO CROSS TEAM

A BRIEF LOOK AT WHAT IT TAKES  
TO MOUNT A SERIOUS DRIVE  
FOR THE WORLD'S  
MOTO CROSS CHAMPIONSHIP.



*The new boy on the Suzuki team, Roger De Coster, will represent the factory in the 500cc World Championship events. His efforts have started off well, with a decisive win in the first round of the series which was held in Italy.*

meet the demands for their products. It was only a matter of time before the Japanese manufacturing giants took note of this trend, and decided to get in on the action.

First to make a serious attempt at creating a proper moto cross machine was Suzuki. In 1968, Suzuki signed Swedish moto cross rider, Olle Pettersson, to a contract that called for him to ride the new machines in competition, and then suggest the changes necessary to make the bikes truly competitive. The Swedish rider did his job well, and by 1970, Suzuki felt that they had a machine capable of running with the best.

The next logical step was to hire riders possessing the talent necessary to wring the best from the new machines. The first year's efforts would concentrate on the 250cc moto cross class, and thus, Suzuki signed three time World Champion, Joel Robert, as Team Leader. Another Belgian, Sylvain Geboers, a hard charging racer who specializes in sandy courses, was also signed to the infant team. Pettersson was retained to round out the effort.

## JOEL ROBERT

At 26 years of age, Joel Robert is



*Sylvain Geboers, began moto cross racing at the age of 17, and since then has been a consistent contender for the title. He won third place in 1968, and finished 2nd in both 1969, and 1970, in the 250cc class.*

Prior to 1970, factory efforts in pursuit of the 250cc, and 500cc World's Moto Cross Championships, were rather "small time" undertakings. In the years 1965 through 1970, CZ and Husqvarna were the main contenders for these titles.

The Swedish, and the Czechoslovakian firms, were the acknowledged masters at building competitive moto cross equipment. As the last decade entered its final years, the sport of moto cross racing boomed. And, in this country in particular, moto cross competition had caught the fancy of both the riders, and the spectators. Sales of moto cross machines soared, and the small European factories were hard pressed to



*Should team leader, Joel Robert win the 250cc title this year, he will become the first man in the history of moto cross to win five World*

*Championships. With decisive wins in the first two rounds, he's well on the way to setting that record.*





**Designed for the 500cc rounds of World Championship competition, the RN71 has a total capacity of 367cc's, and weighs 198 pounds. A**

**4-speed gearbox is used, and the machine develops a maximum 39 hp.**

already one of the most successful racers in the history of moto cross. He won his first championship in 1964 at the age of 20. That year he was elected Belgium's, "Sportsman Of The Year" award. Since that first outstanding year, Robert has won the 250cc championship in 1968, 1969, and 1970. Last year of course, was his first aboard Suzuki. Joel is one of motorcycling's great "natural talents," and his is seldom, if ever, beaten by another rider; machine failure is the thing that usually keeps Robert from finishing in first spot.

#### **SYLVAIN GEBOERS**

Geboers, began moto cross racing at the age of 17, and right from the start he was a consistent contender. In 1968, he placed third in world standings, and in 1969, and 1970, he finished second on the list. Geboers is a very intent competitor who's been dogged by bad luck. His relationship with team-mate Joel Robert, deteriorated rapidly during the 1970 season, and there were rumors of the two riders actually coming to blows.

#### **OLLE PETTERSSON**

It would be easy to consider Pettersson remained on the Suzuki team as a reward for his efforts in developing the racing bikes. However, his performances in the past two years prove that he is not the "over the hill" rider many people had assumed. In 1969, Pettersson finished third in the World's 250cc standings, and he's off to a good start this year with a second place in the Spanish Grand Prix. Pettersson, displays little of the flamboyance his team-mates



**Contesting the 250cc events, the RH71 develops 30 hp, and weighs a mere 187 pounds. A 5-speed gearbox is standard.**

do, yet he is an extremely consistent performer.

#### **ROGER DE COSTER**

The latest addition to the Suzuki Moto Cross Team is Roger De Coster who was signed to contest the 500cc World Championship class for 1971. Born in

Brussels, in 1949, De Coster began moto cross racing in 1962, at the age of 13, and won the Belgian Junior 50cc title that same year. He joined the CZ Factory Team in 1965, placed fifth in the 500cc World Championships both in 1968, and 1969. And, last year he won the Belgian GP 500cc title. De-Coster is one of the most stylish moto cross racers in the world, and he's off to a good start this season with a win in the first round of the 500cc series held in Italy.

With Suzuki's entry into the world of big time moto cross racing, the entire complexion of the sport has changed. Anyone who has read Torsten Hall-

man's book, Mr. Moto Cross, knows that chasing the world's championship was a very casual affair before Suzuki entered the picture. In the years before 1970, moto cross racers traveled from meet to meet towing their bikes and spares in small trailers which were fastened to the bumpers of their personal automobiles. Now, since Suzuki has entered into moto cross sport, there have been many changes, and it will probably continue to change. Yamaha, has signed Torsten Hallman to aid in the development of their moto cross machines. Currently, Suzuki has a distinct advantage in moto cross competition. But, in the next couple of years we may see a repetition of what happened when the Japanese giants decided to go road racing.

Moto cross racing has become very big business, and the benefits of fielding a World Championship machine are quite obvious.

So far, Suzuki has gotten off to a good start in 1971. Their Factory Team riders have won both the Spanish Grand Prix (250cc), and the Italian Grand Prix (500cc). Then, only a week after this initial outing they took a victory in the 250cc Swiss GP at the second round of the season.

Defending World Champion, Joel Robert, won the Spanish and Swiss events while Olle Pettersson took second on another factory Suzuki in Spain, and sixth in Switzerland. De Coster, placed first in Italy, on his Suzuki RN-71.

Suzuki appears to be solidifying the position they established in 1970. ●



**With the Suzuki factory since 1968, Olle Pettersson is the first European moto cross racer to sign a contract with a Japanese factory.**



# KAWASAKI

## NEW DESIGN MOTO-CROSS EXPANSION CHAMBERS

### AVAILABLE FOR THE G-31M F6-125 F7-175 F8-250 F5-350

#### KAWASAKI COMPETITION ACCESSORIES

"Bill Wirges Creative Enterprise," Box 204, Princeton, Illinois, is proud to announce the opening of an exclusive West Coast Distributorship, "Wirges Distributing Co.," P.O. Box 12228, Las Vegas, Nevada.

"Wirges Distributing Company" now has complete inventory of all products manufactured by "Bill Wirges Creative Enterprise." Products range from a complete line of Expansion Chambers through a complete line of Suspension Components.

Catalog is available for \$1.00, which is refundable on first order.

## DEALERS ONLY

\* \* \* \* \*

Chrome Sissy Bar

1/2" • 5/8" • 3/4"  
x 28" • 36" • 40" • 60"

With All Fittings

Chrome 7/8 and 1" Handlebars  
With 3-5-8-9-10-15-18-20" Rise

Drag Bars, Round Square Shape,  
Reach Bars, Drop Bars • Detroit  
Specials • Cross-Country Bars  
Mens' & Ladies' Black Leathers •  
Jackets & Pants

Colors On Order

Fibre-Glass Tanks & Fenders  
Windshields • Safety Bars  
• Saddlebags

KEHOE & CO., Dept. M.C.

30119 Champine Dr.

St. Clair Shore, Michigan 48082

(313) 771-6325

Catalog—\$2.00 on your letterhead

H-D  
CUSTOM

and left this to be done by an expert. When he isn't out riding his scooter, you can usually find Jim behind the counter over at "The Hog Shop," in Van Nuys, California, as this is where he works. It's a "groovy" kind of place where they sell nothing but chopper parts, and they have turned out some pretty wild scooters. Jim decided to turn the painting chores over to Lou Serroul, who has been doing all of the work for "The Hog Shop" lately. Lou is fairly new to California having recently moved here from the East, where he had done a lot of custom paint work on both cars and bikes. Out here he plans to stick exclusively with bikes, and if the paint work on Jim's chopper is any indication of his talent, Lou is going to be a busy guy. The deep candy blue was done in crushed platinum, and the candy tangerine paneling which has been outlined with silver striping really gives Jim's chopper a rich appearance, without being gawdy. Jim made the cobra-shaped seat frame, and then sent it over to Arko, in Encino.

As we mentioned, this chopper was built for go as well as show. D & D Distributors of Burbank were the ones responsible for most of the "trick" engine work. The 1952 Harley lower end has been fitted with a later '54 top end, and a pair of .050 over FLH pistons. The other item that adds to the engine's 86 cubic inches is D & D's 1/4-inch stroker, and while they were increasing the stroke they also removed 5 lbs. from the flywheels for greater rpm. The heads have been ported and polished and retain the stock exhaust valves, while larger 2-inch intake valves were installed, adding to the machine's gusto. The valves are actuated by a Sifton 468S camshaft, and chrome-moly push rods are used to lessen the chances of their bending. The stock ignition will put out 10,000 volts, but when Jim was through the output jumped to a whopping 40,000 volts. The dual-point distributor utilizes Mallory condensers, and a pair of Model A ignition coils to put out all the zap. A Bendix carburetor, off the new '71 Super-Glide supplies the food to the hungry beast.

The power is transmitted to the '52 Harley 4-speed via a 5 plate Burnett racing clutch. From there a 25 tooth countershaft sprocket delivers it to the 52 tooth rear sprocket, and from there the machine is long gone, leaving little to be seen but a trail of smoke from the rear tire.

## Take stock in America

Buy U.S. Savings Bonds  
& Freedom Shares



advertising contributed for the public good

### "Up On The Pegs"

The Mexican 1000 has become a classic off road event, one that rivals the African Safari with one difference, they allow motorcycles to race the Baja. It has so much prestige that Husqvarna, Bultaco, Yamaha and Harley-Davidson have launched full efforts to win it. Not to mention Ford, General Motors, American Motors, and Saab. Sears thought it ideal for pushing tires and many other people with their air filters and spark plugs use Baja as a proving ground testimonial. And I think it's groovy because the biggest, best prepared, and most money spent

can't guarantee a win.

No where else can race cars and motorcycles have a go at the same time on the same race course to see which is best. Only the fastest of the cars can run with the bikes, and they break more often than not. Through the years half the finishers in the first ten are motorcycles, yet they make up about 12 percent of the total entry. The Mexican 1000 belongs to the two wheelers, and I am glad to be a part of both. Maybe that's why my NORRA membership card is numero uno.



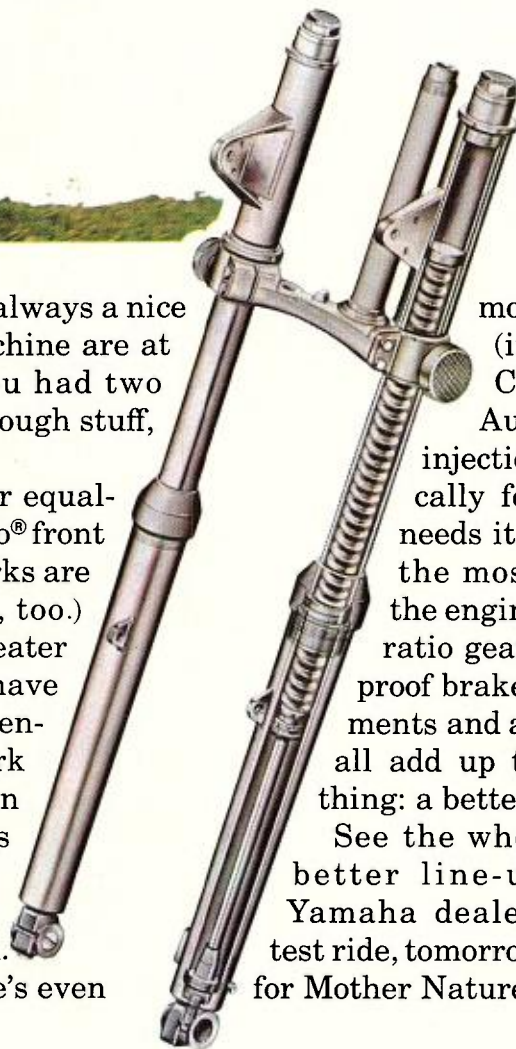


# The idea is to go over it. Not around it.

**S**weet old Mother Nature isn't always a nice lady. Off the road, man and machine are at her mercy. And, until now, you had two choices. Either ride around the rough stuff, or take what nature dished out.

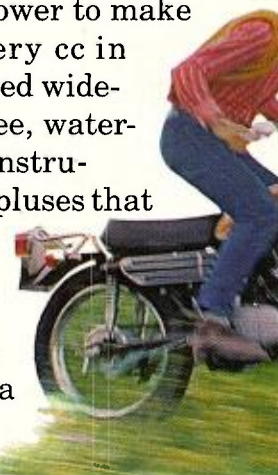
This year Yamaha has a better equalizer. A bigger, better set of Enduro® front forks. (And, catch this, similar forks are on all our larger street bikes, too.) They're larger in diameter for greater strength. And two piston rings have been added inside for better dampening action. We've increased the fork travel about 10%. The handle crown clamp that holds the handlebars and forks is stronger. And the axle securing mounts are cast larger—again for greater strength.

And, from the forks back, there's even



more. All Yamaha Enduros (including the 175 Enduro CT1-C shown below) have Autolube, our exclusive oil injection system that automatically feeds the engine oil as it needs it. Five-port power to make the most out of every cc in the engine. A five-speed wide-ratio gearbox. Dustfree, waterproof brakes, separate instruments and a lot of other pluses that all add up to the same thing: a better machine.

See the whole bigger, better line-up at your Yamaha dealer's. Today a test ride, tomorrow a match for Mother Nature.



Yamaha International Corporation • P.O. Box 54540, Los Angeles, California 90054 / In Canada: Fred Deeley, Ltd., Vancouver, B.C.



**YAMAHA**   
It's a better machine



# Nuts & Bolts

by Dave Ekins

Dear Sirs,

I'm writing to you for some expert advice. I am currently on active duty with the U.S. Air Force in Okinawa. I own a 1963 250cc Honda, and as I'm sure you're aware, Japanese motorcycles can be purchased here for about 70% of the Stateside price.

I plan to buy a new bike before I return to the States. I want a bike for both on and off road use. My problem is deciding which of the many Japanese bikes available here is for me. Your comments would be most welcome. I'd be especially interested in your opinion regarding the 2 cycle vs the 4 cycle engine and the relative advantages and disadvantages of each.

When I return to the U.S.A., I will be living in Minnesota. Do all the Japanese motorcycle manufacturers have service outlets in that area?

Thank you for your help.

Sincerely yours,  
William H. Hagen  
Major, USAF, MC

*There are four Japanese companies doing a landslide business in the U.S. They are Honda( of course), Kawasaki, Suzuki, and Yamaha. The latter with their DT1 had gotten a head start in the dirt bike race and are still ahead, but losing ground steadily.*

*The two cycle has proven to be a better engine for off road use. Its lighter weight and greater pulling power at low speeds are what make the two stroke engine superior.*

*Honda's four stroke is still a fortress of reliability. I think their SL125 would be a fine choice if you want to stay within those cc limits. Anything larger and you'll have to go to the two cycles.*

Dear Dave,

I have a problem with my front forks. I have a 1971, AT1 125 Yamaha. The front forks aren't dampened enough, and when I hit the bottom of a hill, they hit the bottom and I feel they're going to become ruined. I read an article on how to dampen the forks, but it's too expensive. I'm only 13 and my father won't let me buy it. He has the say of my bike.

Sincerely,  
Don Cohen  
Hidden Hills, Ca.

*I know Don, I'm a Dad myself. Probably the quickest and simplest way*

*to slow up the action in your forks would be to put a heavier weight oil in them. You go about this by just draining out what's in them thru the drain screws, be sure to measure the amount that comes out. Then remove the nuts on the top of the forks and put in a like amount of a heavier weight oil. 10-30 automotive oil isn't a bad one to start with. There are people who specialize in fork oils and their products are better.*

*Actually there are many reasons your forks bottom. Travel, spring rate, and hydraulic dampening are the key factors that control the fork action. Change one and the others should be changed too. This is why, to do the job properly, it takes a little bread, more than a 13 year old is used to parting with. So just put in a slightly heavier fork oil Don, and the action will slow up, and not tend to bottom as quickly as it used to.*

Dear Sirs:

I am interested in getting some information on the 1971 International six days trials in Great Britain:

Specific dates—  
Exact location—  
How the race is organized—  
Name of organizers, and how I may reach them—

The dates on past publications of yours that may contain information on past races—

I would appreciate any information you may come up with. Keep up the good work, for I enjoy your magazine very much. Thanks!

Bob Lundquist  
Cedar Rapids, Iowa

*This year the I.S.D.T. will be held on the Isle of Man located in the Irish Sea between Great Britain and Ireland. Actually it's about a four hour boat ride from Liverpool.*

*I haven't got specific information at this date, just rumors. The American Motorcycle Association will be responsible for the U.S. riders who wish to go. I suggest you write them about how to go about getting entered.*

*The date of the Six Days will be the second or third week in September. I rode the event there in '65 and thought little of it. You have to be a lover of rain, mud, wet rocks, and bogs to enjoy this one.*

Dave,

In the January issue of Modern Cycle, you answered a reader's question concerning what kind of motorcycle would be good for street and dirt racing. Your last sentence being, "but I refuse to say how good for which." Do you consider the Honda SL350K1 to be one of the better dual purpose machines?

Would changing the Honda SL100 over to use 100% alcohol be practical for moto cross racing and, if so, who in Southern California can modify the carb, or is there any fuel additive that would increase performance? The only modifications to this bike to date have been installing a megaphone, 26mm carb and removal of lights.

Thank you,  
'Brad'  
Carmichael, Calif.

*Yes, Brad, I am a great booster of Honda motorcycles. The SL350K1 is a spiffy dual purpose bike, but not competitive for racing.*

*You'd better check the rule books before changing to alcohol. If you tried running fuel in district 37 you'd get tarred and feathered. When converting for alky figure a flow factor of 2½ times the amount of gasoline used. You'll have to make all the passages bigger probably clear up to the gasoline tank shut off valve. To take advantage of alcohol fuel you should run about a 14 to 1 compression ratio and a straight exhaust pipe instead of the megaphone. Alky runs cool and really increases torque. Just the thing for scrambles.*

Dear Dave,

I have just finished reading the February issue of Modern Cycle; it was great!

Anyway, I have a Yamaha 125 MX, 1971 model and am going to change the suspension. I have decided on Koni shocks for the rear, but the front end is a different story.

I have narrowed it down to Cerianis, or the Van Tech leading link forks.

Which would be best? I use the bike strictly for bashing and tearing around and raising the dead out in the boon-docks of Southwestern Oregon!

Sincerely  
Dave Swigert  
Brookings, Oregon

P.S. You still have the best magazine going, keep up the good work!

*A leading question that can get me in a whole lot of trouble Dave. There are many people who like leading link forks, I am not one of them.*

*I prefer teledraulic forks, for your machine I would use the medium weight Cerianis.*

## SUBSCRIBE

(Text continued on page 62)



s down to, the more precisely  
o measure something, the more  
ur measurements must be. And  
the more accurate your measur-  
ments are the language of sci-  
which we use to communicate the  
precise dimensions of many things.  
Measurement is really nothing more  
common reference point which we  
or a comparison.

the only difference in generally measur-  
the size of an object, and measuring  
precisely is the application and under-  
standing of a more precise instrument.  
For precision measurements rulers  
on't cut it because they which are not  
judgement of your eyes which are not  
accurate enough, plus you can't always lay  
the ruler absolutely flat against an object.  
You need tools that will actually touch  
the surfaces before you can come up with  
an accurate measurement. We've slipped  
one of these tools in the list of the work-  
shops tools, but it's a simple instrument to  
use once it's understood. Through the cali-  
brated scale on the "Vernier caliper" you  
can obtain accurate measurements on the  
height, width and depth of many parts on  
your motorcycle. As to the preciseness of  
these measurements, if used and read pro-  
perly the Vernier caliper can accurately  
gauge to within 1/1000 of an inch.

A Vernier caliper is a finely honed pre-  
cision instrument consisting basically of a  
stationary part and a movable part. The  
stationary part is the "graduated beam"  
which has a fixed measuring jaw attached  
to one end. The movable part is the Ver-  
nier slide assembly which is combined  
with the stationary part through the use  
of clamp screws and an adjusting nut. The  
Vernier slide moves as a unit along the  
graduated beam, so both jaws can be  
brought into contact with the object to  
be measured. The readings are taken in  
thousandths of an inch by the position of

## SO YOU REALLY WANT TO BE A "DO IT YOURSELF," WELL HERE'S HOW



**MOTORCYCLES REQUIRE MORE THAN A SCREWDRIVER, WIRE STRIPPER AND A PAIR OF PLIERS IF YOU PLAN TO WORK ON THEM. HERE'S A LOOK AT THE "BASIC" TOOLS WITH EXPLANATIONS ON HOW TO USE SOME OF THE MORE INTRICATE ONES THAT MIGHT HAVE SCARED YOU OFF BEFORE.**

Today people are enjoying more leisure time than ever before, and if the current trend continues there will be even more of this time available in the future. This, plus the insidious nature of most people to be curious, has brought about the era of the "do it yourselfer." For some strange reason as the amount of leisure time increases, so does a person's willingness to tackle many projects which are totally foreign to him. Previously, a person who was qualified in a particular field would have been called in to do the work. Basically, people like toinker, and often times they can save a considerable amount of money by doing the job themselves. But even more rewarding to this "do it yourselfer" than the monetary savings is that tremendous feeling of self-exaltation once they have accomplished their alien task.

Automobiles are generally one of the first objects to come under attack by the do-it-yourselfer. However, if this person owns a motorcycle, it'll take precedence over everything else when the "fix it myself" fever first hits. To him, his motorcycle appears to be essentially simple in construction and function, and with the multitude of books, magazines, factory shop manuals and other materials which are available to help guide him through every phase of the two-wheeled machine, he feels even more confident about his undertaking. Then, after staring on his little project he finds out that he has nowhere near the proper tools to do the job with the simplicity he anticipated. Remembering what the salesman said about

about the "tool kit" which comes with the bike, he quickly finds the compartment where they are stashed. While they make things a little easier, he realizes the function of their crude design was intended to provide the rider with something more than a rock and a stick should this marvelous machine break down in the "boonies."

Most motorcycles are relatively simple, and the owner generally can handle all of the maintenance and many of the repairs that inevitably are required—PROVIDING HE HAS THE PROPER TOOLS!

Unlike many other areas frequented by the do it yourselfer, automobiles and motorcycles require more than a screwdriver, wire stripper and pair of pliers if you intend to work on them. Of the two, motorcycles are more demanding in their choice of tools due to the variations in measurement used in their fastening hardware.

If you own a Triumph, BSA or any other machine built in England, Sir Joseph Whitworth is the man responsible for the system of measurement that is applied to the nuts and bolts found on your motorcycle. Good Ol' Sir Joe founded a company in England that became a leader in tool design and manufacture, and through this company he introduced the system of standard measures, gauges, and screw threads known as "Whitworth" which are used by his country. Nobody really knows why the English so readily accepted this way of measurement, as "Sir Joe" also established principles of gun design which were adopted by all of the major countries

except his own, England. While they did reject his gun principles, Whitworth added to the motorcyclist's tool dilemma with his standard of measurement which was accepted by his countrymen.

Next we find the Metric system, a standard of measure developed by French scientists in the 1700's. Probably, within the next few generations the Metric system will be the most widely accepted standard in the tool field. This will be a big help to your grandchildren, but at present you're faced with a second standard of measurement used for tools. Motorcycles manufactured in Continental Europe countries and Japan will generally use the Metric system of measurement, applying it to the nuts and bolts used on their bikes.

Last, but not least, is the standard we use in the U.S. The nut and bolt sizes, and the sizes of other two systems produced in this country.

Hopefully someday universal standardization will exist. In the meantime, wrenches and other tools then the American motorcyclist is faced with three different standards of measurement in the area of tools.

To better understand all of this, we'll explain the differences between the three systems. Metric and American fasteners are measured in the same manner. The distance across the parallel flat

the Vernier slide "zero line," and its relation to the increments on the beam. Both inside and outside dimensions can be measured with this instrument and there are many on the market that provide a way for you to also gauge the depth of a hole with the same precision. The term Vernier is taken from the name of the man who broke these measurements down into finer and finer degrees. The Vernier caliper is designed to take quick accurate measurements, and should prove to be a versatile tool for your motorcycle measuring needs.

Follow along while we briefly explain how you go about obtaining accurate readings from the Vernier caliper. The stationary beam of the caliper is broken down into increments representing 1/40 or .025 of an inch. At every fourth increment there is a longer line with a number above which designates 1/10 of an inch. The Vernier slide, or movable part of the instrument, is divided into 25 divisions on the movable slide occurring the same amount of space as the 99 measurements or divisions on the stationary beam. Since one division on the stationary beam represents .025-inch, 99 would equal (99 x .025) 2.475-inches since the 25 divisions on the movable



More screws are ruined by using the wrong size screwdriver than anything else. You'd be wise to purchase a complete set of both Phillips and regular slotted screwdrivers. Also, an impact driver is a necessity on most motorcycles. Putty knives come in handy for scraping old gaskets off along with many other uses.





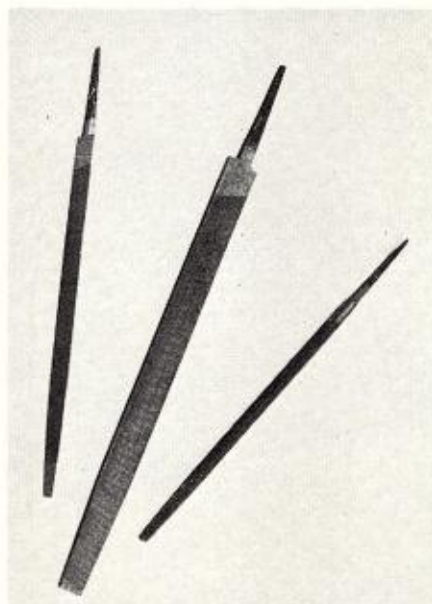
**Many times you can't get at nuts and bolts with socket wrenches and you'll need some hand wrenches to do the job when the socket can't. Crescent wrenches are adjustable for any size of nut or bolt, and are a necessary item in any tool box. But, don't get carried away with their use as they should ONLY be used when you don't have a wrench to fit. They are prone to rounding off the heads of bolts when they are used repeatedly, and you won't be able to get the bolt loose then, even with the right size wrench.**

take up the same amount of space, they also equal a total of 2.475-inches. Therefore, one division on the slide equals  $1/25 \times 2.475$ -inches, or .024-inch. This makes the difference between one beam increment (.025-inch), and one slide increment (.024-inch), .001-inch (.024 subtracted from .025). If the instrument is set so that the "0's," on both the slide and beam coincide, the first increment to the right of the "0" on the slide will differ from the line to the right of the "0" on the beam, by .001-inch; the second line .002-inch and so on. This difference will continue to in-

**Nothing is more aggravating than finding you need to drill a hole, but you don't have a drill motor or the bits to go with it. They are not that expensive, and in the long run you'll be glad you bought one. They can**

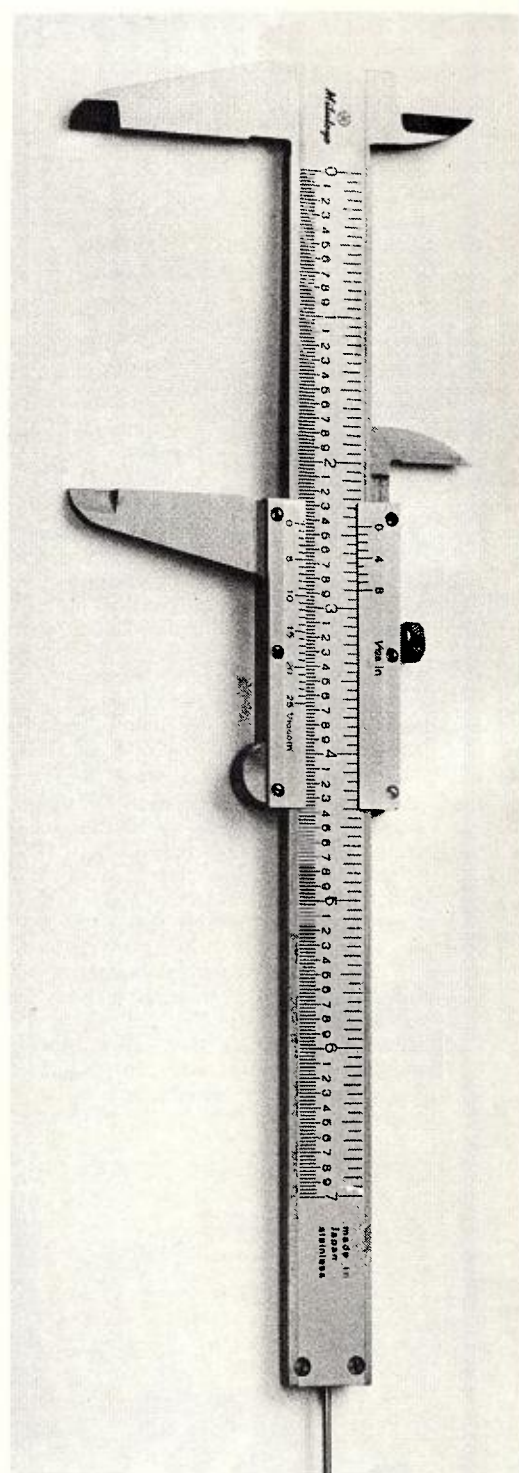
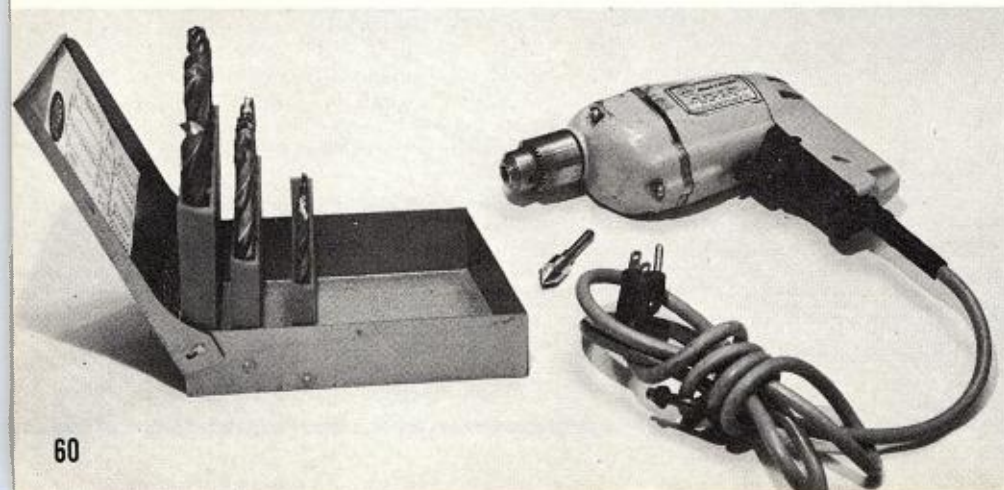
crease .001-inch, until the 25 on the slide matches up exactly with the 2.5 line on the beam.

Now to "read" what all of this means in terms of measurement, note how many inches, tenths (or .100-inch) and 1/40th's (.025-inch) the "0" mark on the slide is from the "0" mark on the beam. You then count the number of thousandths indicated by the lines on the slide until you reach the point where a slide increment lines up exactly with one of the increments on the beam. For an example, let's look at the photo illustration we have used. The slide has been moved to the right 2-inches plus .400 (indicated by the no. 4) plus .025-inch (shown by the "0" on the slide lining up with the first increment after the "4"). This gives you a total



**Files are one of the accessories that many people realize they don't have, just when they need them. They are inexpensive, and should be a part of your tool set.**

**do a multitude of other jobs with the many attachments that are now available. A good selection of drill bits should go along with the drill motor.**



**Micrometers, or any precision measuring tool, seems to scare people away because they don't know how to use them. The Vernier caliper is a fairly simple instrument to use, and if "read" properly will be accurate within 1/1000-inch. In most instances this is close enough for any motorcycle work that you'll encounter. A Vernier caliper can measure depth, outside diameter, and inside diameter. It's not too expensive and you'll find it is a very versatile and easy to use precision measuring instrument.**



of 2.425-inches, and then counting the number of lines (thousandths) on the slide to a point where one line up exactly with one of the beam increments, we find that the eleventh line coincides exactly. So, we take this .011-inch, add it to the 2.425-inches, and come up with a total reading or measurement of 2.436-inches.

Like any precision measuring tool, a Vernier caliper should never be forced. The slide should always be moved with your finger, until the jaws make contact with the object that you're measuring. Then, tighten the clamp screw located above the fine adjustment nut, and turn the fine adjusting nut until the jaws feel firmly, but NOT TIGHTLY, engaged. Tighten the clamp screw over the slide, then remove the caliper carefully and take your reading.

We think we have pretty well covered what you need in general if you have aspirations of doing a lot of the work on your motorcycle yourself. However, there are always a few of those "special" "factory tools" such as, a puller, special wrench and so on, that you might have to add, as the conventional tools won't work. While it may seem like a big outlay of money it doesn't take long for these tools to pay for themselves. The most important thing to remember is that by having the right tool for a particular job, you've already got the work 75 percent completed, plus you don't have to sweat breaking something by trying to "Mickey Mouse" a way of getting it on or off. As far as the knowledge, with the simplicity of most service manuals and other material that is available, if you can read a comic book the knowledge should be easily acquired. It may take a little more time to decipher what some of the foreign service manuals said, or meant to say, but this hurdle is simple to overcome. Welcome to the money saving world of the "do it yourself."

#### RECOMMENDED WORKSHOP TOOLS

Allen Wrench set	\$ 1.00
C-clamps	5.00
Center punch	1.00
Chainbreaker	4.00
Circuit tracer	4.00
Drill, electric (3/8-inch chuck)	15.00
Drill bits—set	12.00
Files—triangular, flat, rattle, etc.	10.00
Gap gauges—general, spark plug	3.50
Gasket scraper	2.00
Hacksaw, adjustable	3.00
Hammers	
Claw	4.00
Ball pein	4.00
Soft tip	4.00
Pans (oil draining, etc.)	3.00
Pencil magnet	1.00
Piston ring compressor	4.00
Pliers	
Regular	2.75
Needle nose	3.00
Wire cutters	3.00
Channel-Locks	4.00
Vise grips	4.00
Circlip remover	3.00
Propane torch	10.00
Puller, universal-type	10.00
Rule, metal	1.00
Screwdrivers	
Standard blade set	8.00
Phillips blade set	8.00

*Sockets, 33 piece master set (3/8-inch drive)	35.00
Soldering iron	10.00
Stiff brush (for cleaning)	1.00
Strap wrench	3.50
Tin snips, right and left-hand	5.00
Wrenches	
Crescent adjustable	
6-inch	2.75
10-inch	3.75
Combination open end and box wrenches—10 piece set	8.00
Impact driver	10.00
Torque wrench	30.00
Vernier calipers	30.00
Vise	25.00
Xtras	20.00
	<hr/> \$321.25

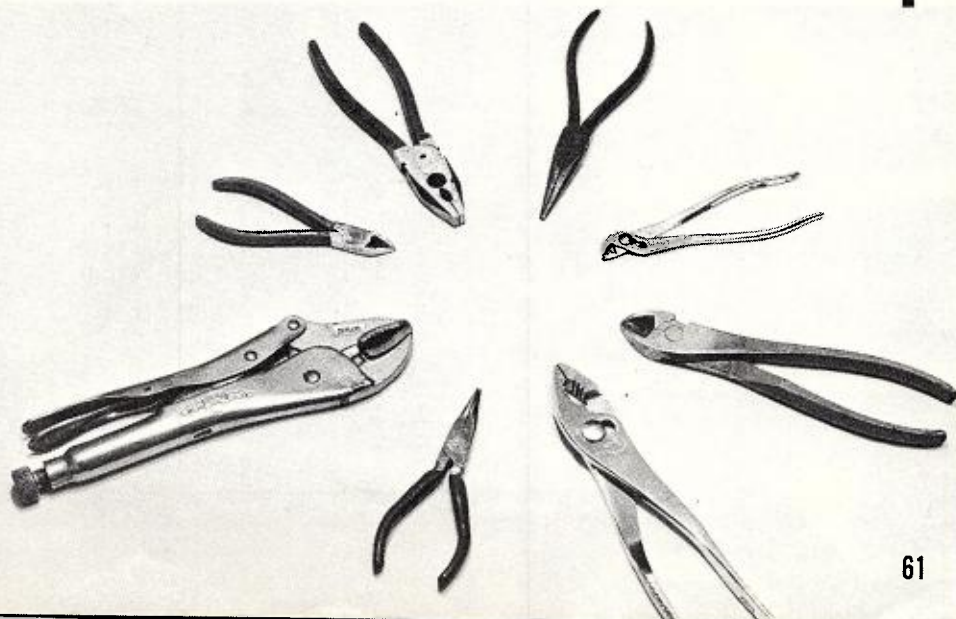
**ADDITIONAL ITEMS THAT SHOULD BE INCLUDED**  
All-purpose grease, Gasket sealer, Grease gun with nozzle to fit Zerk fittings, Loctite, Lacquer thinner, Penetrating oil, 3-M weatherstripping, Solvents (for cleaning parts), Trigger-type oil can.

\*Prices can vary slightly depending upon the "standard of measurement" that you want. As a rule Whitworth sets will be slightly higher.

**When buying tools always make sure they have "Forged" or "Drop Forged" stamped on them. This is your assurance of a stronger tool.**



**There are a vast array of pliers available for every kind of application. Here is a good selection for anybody planning to do the work**



**The price of an acetylene torch set-up is high, but you can purchase one of the butane units for about \$10.00. While you can't do any tough welding jobs with a butane torch, there are many other areas where you'll find a need for heat. Splitting cases, getting wrist pins out of pistons, heating metal so that you can work it are just a few of the areas where you'll need to use heat. To properly do any wiring job the connections should be soldered for maximum strength and contact. A soldering gun is an inexpensive item that will pay for itself quickly.**

**on their bike themselves. Each one is designed for a particular job, and they can be easily broken or ruined if you use them for anything else.**



# SUBSCRIBE



**MODERN CYCLE**  
**SUBSCRIPTION ORDER BLANK**  
7950 DEERING AVENUE CANOGA PARK, CALIFORNIA 91304

12 BIG ISSUES FOR \$5.89  
Please enter the following one-year subscription(s).  
PAYMENT IS ENCLOSED FOR \$ \_\_\_\_\_



NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

ZIP \_\_\_\_\_

PLEASE ENCLOSE PAYMENT WITH ORDER

## Nuts & Bolts

by Dave Ekins **contd.**

Dear Sir,

I have a 66 250cc Yamaha and I would like to know if there is some way I can change my street bike into a racing bike which will really do its number? I was reading your March edition of Modern Cycle, and I would like to know if I could put the "L" or "Dykes" rings in my bike for more power? If not what would you suggest me to do? If I can, what will have to be done, and what material will I need?

Would the Tarabusi racing pistons for a 250cc Maico Scrambler work?

I would like to know how I would go about changing my ratio. Also, what size cam would be best to use? It has been bored twice. If my answers cost anything, please tell me. I will appreciate anything you can tell me.

Charles D. Hughes  
Rich, Va.

*No your 250cc '66 Yamaha won't really do its number. It is very difficult to make chicken salad out of chicken poo.*

*Look Charles, if your asking about cams in a two stroke then you've got to be as green as apples in March. If you want to race get a racer, you're gonna be a lot better off in the long run. That old 250 twin was really a great bike when it was new. But the new racers are so much better it would just be a shame to put a lot of work into a potential loser.*

Dear Sirs,

I own a Honda CT 70 (minitrial) and I would like to hop it up. Could you please send me the names and addresses of some places that I might be able to obtain any of the following: front and rear suspension, engine components, and knobby tires.

I would appreciate this information very much and keep up the good work on your mag.

Bill Bishop  
Dunwoody, Georgia

*Webco, down in Venice, California, have a nice manifold and carburetor kit that really helps the CT70. Their address is somewhere in this book. They may also fix you up with rear suspension, the tires I don't know about.*



# THE SUZUKI TS-185R SIERRA



In the early years of off-road riding, the size of the engine in trail bikes seemed to have been arbitrarily selected to suit the intended use of the machine. 15, 55, 80, and 90cc engines were quite common in the early trail bikes.

With the fantastic boom in off-road riding, the manufacturers of trail bikes began to offer machines powered by engines which adhered to accepted competition capacities. 100, 125, 250, and lately, 360 trail machines have become the order of the day. The logic of sticking to capacities acceptable in the various racing classes is quite simple. Almost everyone who has ever purchased a dual-purpose or off-road bike has, at one time or another, considered entering competition. In most cases this secret wish is present even

**AN INTERMEDIATE SIZE MACHINE WHICH WILL APPEAL TO ANYONE WHO APPRECIATES A GOOD TRAIL BIKE.**



before the purchase of the machine. Thus, the logic of sticking close to accepted competition capacities. Who wants to buy a 90cc machine when the smallest class being raced in the area is 125? In order to foster this silent wish to race, many manufacturers make hop up kits for their dual-pur-

pose bikes. There's nothing wrong with this entire philosophy of marketing and manufacture; it has introduced un-numbered amounts of riders to the joys of motorcycle competition. Lately, however, we've noted a trend which we find very welcome.

In the past year, several manufacturers have introduced dual-purpose and trail machines which adhere to no accepted racing capacity. One of the most impressive of this new breed of dual-purpose machines is the 185cc Suzuki Sierra. The Suzuki Sierra is one of a small number of bikes which fills a very serious gap that exists in the basic philosophy of trail bike manufacture. The step from a 125cc machine to a 250 is quite a long one. Many riders want more power than is available from a 125, yet they feel that a 250 is too much machine. Apparently someone at Suzuki felt that a machine like the Sierra would ideally suit the man who wanted a machine "in between." After spending several weekends on the Sierra, we've come to believe that a machine with this size engine is just about the deal cow trailer. We ran the Sierra over some of our more rugged mountain trails here in Southern California and found that it had more than enough power in areas where the rider of a 250 would be buzzing his engine in first or second gear. As we've already said, a properly set up machine with an engine between 150cc and 200cc can be close to the ideal trail or woods machine.

The 5-speed transmission in the Suzuki Sierra is obviously one of the features that makes it possible to extract maximum performance from the engine when the trail starts twisting. The shift lever is mounted on the left side of the engine and the pattern is: down for low then up four times for the remaining speeds. First gear has a "positive-stop" and once you're in low, the lever can no longer be depressed. Another feature that any confirmed trail rider will appreciate is the Primary Kick Starting which allows the engine to be started while the transmission is in gear. Anyone who has ever stalled a bike in an awkward position on the side of a hill will certainly appreciate this feature. In use, the Suzuki Sierra transmission is very smooth and gear changes are made in a very precise manner. Lever travel needed to make gear changes is not excessive. Neutral on our test machine was never any problem to find, however, the little green neutral indicator light on the face of the tachometer worked only intermittently. The flickering green light never caused any problems because there was never any doubt in our mind that we had indeed selected neutral.

The wet, multi-plate clutch is driven





by means of helically cut gears. The lightweight single cylinder two stroke engine has a cast alloy cylinder and head and the former is fitted with a pressed-in iron liner. Cooling fins on the barrel are quite long and cast-in "bridges" between the fins reduce the chance of breakage and any likelihood of noise brought about by harmonic vibration. The fins on the cylinder head are angled in a manner that directs the air stream toward the spark plug. All of the cooling fins on the Suzuki powerplant are remarkably well finished. The vast majority of dirt bikes and dual-purpose machines come with finning that is usually of a coarse nature. Apparently, the manufacturers believe that the owner of the dual-purpose bike is not as interested in engine appearance as the owner of a street machine. (In most cases, this is true.)

Actually the entire engine is well finished. However, the engine cases have a rather cobby appearance that we find attractive. Rather than smooth, constantly contoured case covers, the

Suzuki Sierra covers are formed to follow the contours of what lies beneath them. Thus, the covers vary in width. It's the sort of forming that you'd find on a proper racing bike and we find it attractive.

Internally, the engine measures out as follows: bore, 64mm; stroke, 57mm; and total capacity, 183 cubic centimeters. Compression ratio is 6.7:1 and the maximum output claimed is 17.5 horsepower at 7,000 rpm. If anything, we feel that this estimate might be on the conservative side. Maximum torque of 13.5 ft. lbs. occurs at 6,000 rpm. Maximum speed, depending upon the state of tune of the engine, is between 70 and 75 miles per hour.

Suzuki uses what they call CCI (Crank Cylinder Injection) to lubricate the 2-stroke engine of the Sierra. Many injection systems simply squirt oil into the intake manifold. With the Suzuki CCI System, oil is squirted into the cylinder and it is also force fed to the crankshaft. 2.3 pints of oil are carried in a tank mounted on the left side of the bike. A small "porthole" allows

***With a dry weight of 220 pounds and a maximum output of 17.5 horsepower, the Sierra is "right in the ballpark" in the power to weight ratio department.***

the owner to visually check the capacity of this important container.

One reason for the excellent reliability of the TS-185R is the Pointless Electronic Ignition System. The lack of points, of course, does away with any wear factor and the P.E.I. system, once properly set, seldom requires attention.

A 26mm VM carburetor draws clean air from a canister mounted beneath the saddle. As with most carburetors of Japanese manufacture, the VM unit shows no tendency to load up nor does it have any "flat" spots. Carburetion on the Sierra is very good. What the carburetor passes into the combustion chamber is carried out through an expansion chamber type muffler carried high on the right side of the bike. This one piece device is tucked in well out of the way of the rider and a chromed steel heat shield protects



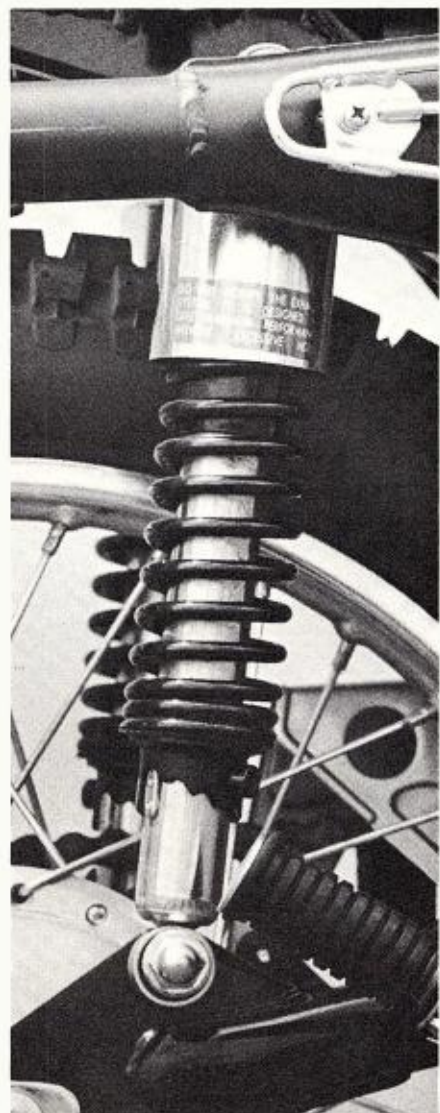
both the rider and the occasional passenger from burns. The end of the muffling system is fitted with a Forestry Approved Spark Arrester, and, at a time when noise has become a real problem, Suzuki should be congratulated for the excellent muffling of their exhaust system.

The Suzuki Sierra engine is a very willing performer and, this, coupled with an excellent power to weight ratio (17.5 horsepower moving a 220 pound machine), accounts for much of the bike's sparkling performance. Seldom are more than two kicks required to bring the engine to life, and, once running, the bike warms quickly. First gear is something of a "stump puller." The remaining four speeds are well spaced and the bike will accelerate with considerable elan. Thanks to the broad power band, it is not necessary

to shift constantly to keep the engine performing at optimum output. The bike can be lugged down in any gear and it will still respond well to a quick twist of the throttle.

Both the suspension and frame design must receive some credit for the

adjust the stiffness of the front end and thus set the bike up to suit various demands. With both the sliders and the stanchion tubes chrome plated, the Suzuki Sierra forks have a very clean appearance. Travel is 6 inches and we found the hydraulic damping to be



**Progressively wound springs fitted to the rear shock absorbers are well suited to their task. Each shock is 5-way adjustable and the owner can set-up the rear end to suit the demands of just about any type of terrain.**



**The front forks on the Sierra offer six inches of travel and they are adjustable to any of three settings. The forks have a clean appearance and they function well in rough terrain.**

rate of knots which they can sustain over rough terrain. Pure power is virtually useless if the machine pitches and bucks when the going gets rough. In this sort of situation, the intelligent rider is forced to back off on the throttle. With one exception, the suspension on the Suzuki Sierra is quite orthodox. The exception occurs at the front end where the pre-load on the internal springs can be adjusted to any of three settings. By varying the pre-load, the owner of the machine can

quite good. Suspension at the rear of the bike is also adjustable. The load bearing springs can be adjusted to any of five settings of pre-load. The springs are progressively wound and a plastic shroud carried within the coils of the springs protects the damping rod.

While the suspension on the Suzuki Sierra is not of racing caliber, it is more than acceptable for woods riding or cow trailing. The rear end suspension on our test machine seemed a bit on the soft side, but, heavier springs (if they are available) would cure that problem. We were quite pleased with the action of the front end. The fact that the stiffness of the forks can be adjusted makes them that much more acceptable for off-road use.





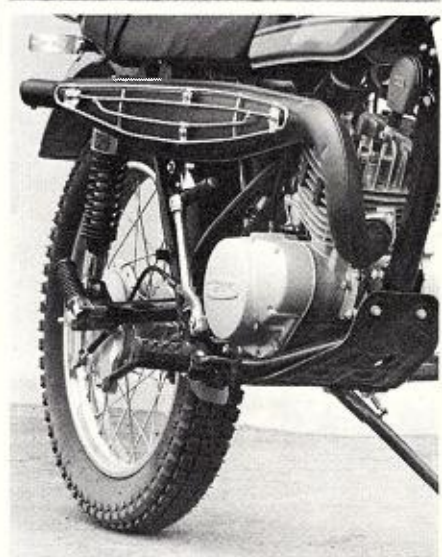
A 3.00 x 19 inch tire is fitted to the front of the Sierra and a 3.50 x 18 inch is found at the rear. Both tires come with a Universal Trials Tread pattern. A full width finned hub is used at the front of the machine and a half-width hub carries the back brace and the final drive sprocket. The brakes on the Sierra require little comment from us. They work well and, even after forging a couple of streams, they still maintain their ability to stop the bike.

Frame design on the Sierra is simple and functional. Essentially, a single loop device, the frame utilizes a large diameter backbone tube and an equally large front down tube. Two smaller diameter tubes welded to the bottom of the front down member cradle the engine and then curve upward to terminate at the backbone.

The sub-frame on the Sierra consists

***The 5-speed constant mesh gear box in the TS-185R is extremely smooth in operation. Primary starting allows the owner to start the machine in gear. Merely pull in on the clutch lever and run the kick starter through its arc and the bike will fire.***

of a pair of diagonal stringers on either side of the machine and an upper loop which supports the seat and rear fenders, as well as providing the mounting point for the tops of the rear shocks. Pivoting on tabs welded within the curves of the cradle members, the swinging arm is constructed with an additional cross brace which provides resistance to flexing. Most Japanese manufacturers of dual-purpose and off-road machines tend to go overboard when they design their frames,



***Ground clearance on the Sierra is 9.7 inches and a sturdy dash plate provides additional protection for the engine. The exhaust pipe, fitted with a USDA Approved Spark Arrester, is tucked in well up out of the way of the rider.***

with the result that most of these units are extremely heavy. Suzuki has avoided this pitfall and in doing so has created a nice balance between weight and strength. Finish was not neglected





***With a capacity of 1.8 gallons, the fuel tank is a bit on the "short" side. Overall styling is good and the bike has a pleasant, light look about it.***

in the construction of the frame. All welds are very nicely dressed and the glossy black enamel is free of any sags.

Actually, the whole bike is very well finished. The machine is available with a green or an orange paint job. The tank is very pleasantly contoured, although a little down on capacity. 1.8 gallons of fuel can make stops at the gas station or trips back to the gas can

a frequent necessity. Instrumentation on the Sierra is surprisingly elaborate for a dirt bike. Both a speedometer and a tachometer are provided and the former is complete with an odometer. An odometer is a handy thing on a dirt bike. Once you've established the kind of gas mileage you're getting out of your bike, you can use your odometer to let you know when it's time to head back to the truck to take on additional fuel.

We were also impressed with the comfort of the Sierra. Although it looks to be on the thin side, the saddle is well padded and quite comfortable.

The relationship between the seat, pegs, and handlebars is good and you can ride great distances with little fatigue. The 9.7 inches of ground clearance makes it easy to loft the bike over small logs and boulders and the light-weight makes it possible to easily muscle the machine through the rough gullies.

The Suzuki Sierra impresses us as a machine designed for the rider who is not interested in racing, but is interested in a high-performance dual-purpose machine. The Sierra is a well-mannered street machine and it is one very fine off-road bike. ●

Make .....	SUZUKI	Clutch Type .....	MULTI-DISC, WET
Model .....	SIERRA 185	Final Drive .....	CHAIN
Price As Tested .....	\$599.00	Starting System .....	KICK, FOLDING LEVER
Engine Type .....	TWO STROKE, SINGLE	Top Speed .....	71.77 MPH
Bore .....	64mm	Tire Size .....	FRONT: 3.00 x 19; REAR: 3.50 x 18
Stroke .....	57mm	Suspension .....	FRONT: TELESCOPIC FORK; REAR: SWINGING ARM
Displacement .....	183cc	Frame Type .....	SINGLE LOOP, TUBE STEEL
Compression Ratio .....	6.7:1	Weight .....	223 POUNDS
B.H.P. at R.P.M. ....	17.5 at 7000	Wheelbase .....	52.8 INCHES
Carburetor .....	MIKUNI (26mm)	Ground Clearance .....	9.7 INCHES
Ignition .....	BATTERY & COIL	Peg Height .....	11 INCHES
Fuel Capacity .....	1.8 GALLONS	Seat Height .....	31.5 INCHES
Lubricating System .....	POSIFORCE INJECTION		

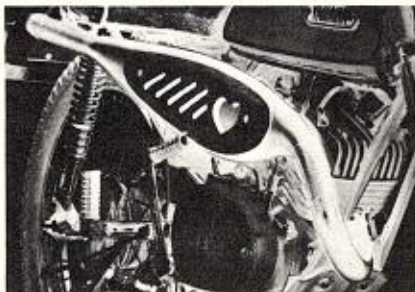


# FOR "HOT SHOES" ONLY



## HOOKEE EXHAUST TUNER

Hot shoe bike racer or just an off-road cycle enthusiast, you can now get out of the two-stroke "rocket" with the revolutionary new Hooker Exhaust Tuner. Tops in auto racing, Hooker's vast experience has enabled us to develop the first exhaust tuner which functions at maximum efficiency with our exclusive "tuned-core" muffler in place. Hydroformed rather than pieced together, the Hooker Exhaust Tuner reduces noise while the dyno-tested shape increases horsepower and torque up to 25%. The aluminum heat shield is the lightest and most effective on the market and each Hooker Exhaust Tuner comes with all the hardware necessary to mount it to your favorite Yamaha, Kawasaki, Suzuki, or Honda.



See your local cycle dealer, automotive speed shop or bike accessory store for more details.

1032 W. BROOKS ST. • ONTARIO, CA 91762 • 714 983-5871

**This year  
why not invite  
your overseas friends  
over here?**



**UNITED STATES TRAVEL SERVICE**  
An Agency of the U.S. Department of Commerce



advertising contributed for the public good



## LETTERS

Steve, like any enthusiastic dirt rider, was anxious to try the Suzuki 400 as soon as it became available. When we told him that we were taking one out for test purposes he kind of hinted that he like to be invited along. He's a fine rider and some of his comments were incorporated in the text which made up the road test.

A road test on the 5 speed Ossa 250 Stiletto is in the office. —Ed.

Gentlemen:

I own a 1970 Kawasaki 90S Bushmaster. I am a woods rider, although the only bike I own is a street bike. The reason for this being, I am only thirteen, impatient, and without much money. Although it handles the not so rough trails pretty good and can even cross a stream, I have one problem. Being a street bike, it has too high a speed (70mph) and not enough pulling power. For this reason, I want to enlarge the rear sprocket without lowering the speed too much. It has a 14 tooth countershaft sprocket with a 37 tooth rear sprocket and 2.75 x 18 knobbies. What size do you suggest I change it to? Also, what size chain will I have to buy and are there are any other changes I will have to make? I really appreciate all of your time because it must take a lot of it to put out such a great magazine.

Yours truly,  
Jeffrey Darkes  
Trenton, N.J.

I have a solution for you Jeff. Just replace the 14 tooth countershaft sprocket with a 13 tooth one. Readjust the rear chain and be on your way. Chances are it won't even effect the top speed.

Sirs,

Since you were the one's who wrote the article about the Proto-air filters, I would appreciate it if you would send me the information on it, as I have written but with no answer.

Yours In Cycle Riding  
Dean Biddle

Hang in there Dean, we've checked with Proto Products and they assure us that they are catching up on their correspondence. —Ed.



The sun is high in the desert sky, a blazing red ball scorching down upon the barren, parched land.

This is Central Australia, land of the Aborigine and kangaroo, of timeless burning deserts where rain may fall every second or third year.

The huge red stone hills rise majestically from the arid, flat plains, shimmering eerily through the heat waves. Nothing stirs, nothing changes, indeed little has changed in countless centuries. It is not at all difficult to imagine that only some 30 to 50 years ago tribes of nomadic warriors roamed these desert wastes, completely free from the white man's influence.

This is the dead heart, almost the geographical center of the continent, from here the sea is at least 1,000 miles in any given direction.

Alice Springs, the isolated "capital" of this area (made famous by countless songs, poems, books and movies) is a bustling little town of some 5,000 inhabitants. This tiny windswept, dust blanketed town is the annual scene of

the Centralian Motor Cycle Meet attracting riders from all over the country. Entries come from as far afield as the northern capital of Darwin (1,000 miles to the north), Adelaide (1,000 miles to the south), Tennant Creek and Mount Isa (hundreds of miles away over some of the roughest roads in Australia).

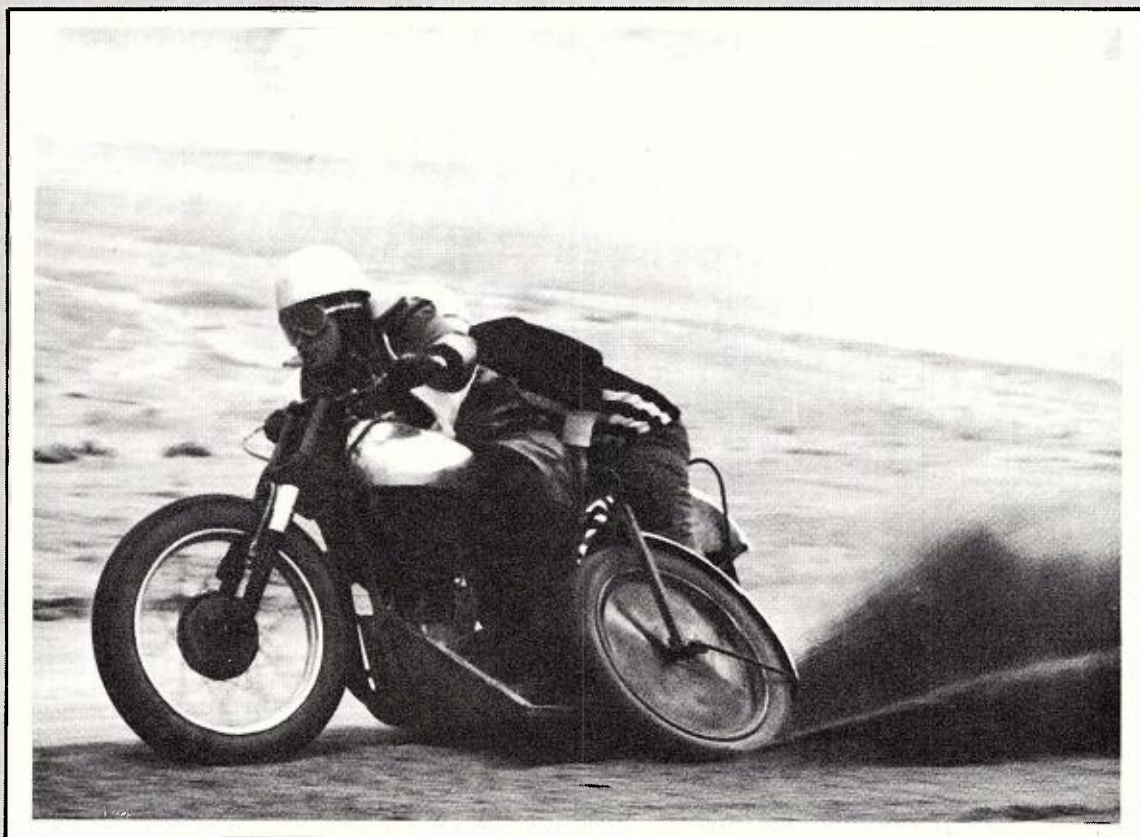
How many Americans would travel some 1,000 miles of rough dusty country (from New York to the Deep South) just to compete in a four day motor cycle championship? Yet these outback Australians willingly travel these vast distances (sometimes driving all night) to pit their skill and courage against their "neighbours." In this vast section of Australia (roughly the size of Europe) one may have to travel absurd distances like 200 to 300 miles to purchase the weekly groceries. In some cases outback stations may be literally hundreds of miles from their nearest neighbors, all communications being by radio and most travel being by way of air.

All types of motorcycle racing is represented in these events including Scrambles, Solo's and Side Cars. Usually these championships are held over the four day Easter weekend with riders and tourists starting to drift into the "Dustbowl" central town days ahead of schedule so as to familiarize themselves with the track and conditions. These conditions can vary tremendously from the familiar ones many of these riders have come from. Riders from the southern states and cities would be more aware of the heat, dust and flies while the northern riders would be experiencing difficulties with the heat and terrain from a totally different aspect. (Darwin at this time of year is a sticky humid heat with temperatures and humidity readings well up into the 90's).

Inter town rivalry is intense and taken seriously with most riders trying their utmost to uphold the honor of their town. Many juniors (and even females) are in town for the championships, including budding young champion. 13

## The Aussies get it on!

*Male and female outfit team of Bob and Veroushka.*



# MOTORCYCLE CHAMPIONSHIPS DOWN UNDER... AND WAY OUT!

story by Colin Stringer photos by Kevin Bowring





**Alice Springs Champion Linden Schlein, takes a corner in the Solo finals.**

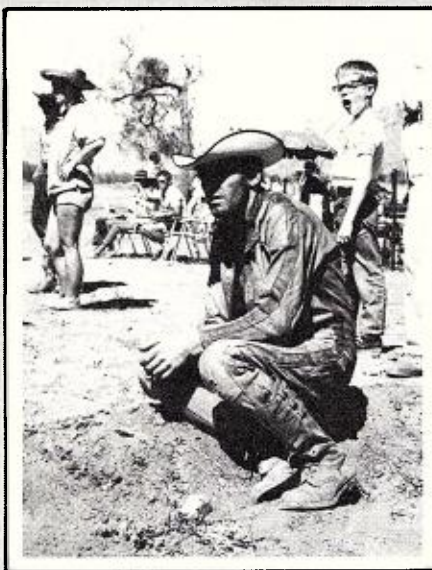
## The Aussies

year old Robby Kollman, who hails from Darwin. The times recorded by this young rider, so far have only been 8 seconds outside the seniors' best time for the scrambles!

Spectators to these championships (stage over the full four days) are being treated to a wonderful spectacle of thrills, spills and motorcycling skills. Naturally most of the spectators have been sprayed and blanketed with the thick red "bull dust" that is so prevalent throughout these areas.

Because of the intense rivalry that exists many riders are forced into pushing themselves that extra bit harder, resulting in plenty of spectacular falls, skinned knees, arms and "rear ends." Remarkably no serious accidents have taken place so far, however veteran rider, Murray Bradley, (well known for his carnival motorcycle tricks) stages somewhat of a serious accident when his wheel locked in a deep wheel rut. The result of the mishap was that Murray was caterpaulted over the cycle's handlebars, skidding along the track on his face! Apart from plenty of bruises, sprains, stitches and a bad case of concussion, Murray was lucky to escape with a bad scare.

The main rivalry exists between Darwin and Alice Springs riders (the only two sizeable towns) and as the competition progresses results appear remarkably even. The Alice Springs riders have been cleaning up big in the side car events, Darwin has won most of the Solo events, while the Scrambles look like being fairly even.



**Darwin rider Sam Moffatt after he lost his mount.**

It gives one a peculiar feeling to stand in this old and timeless land while these bright modern screaming banshees fly past, the only things to break the intense, monotonous desert silence. Standing here where only a matter of a few years back stone age aborigines fought with spear and boomerang, where even today many are not completely civilized!

In the distance the giant red kangaroo can be seen, frozen, silent obviously intrigued by the flashing screaming machines.

The setting for the events is ideal. Situated in a magnificent natural sports arena, a vast flat plain surrounded on all sides by the vast towering ancient rocky hills, The Scrambles course runs through a dry and parched creek bed, the water course offering the only trees and shelter for families around.

The spectators themselves at such a meeting offer some of the most eye catching and colorful scenes as the riders themselves. They are all here from barefoot beachcomber types to ten gallon hatted cowboys, from bikini clad beauties to the beer swilling bearded observers, from Mr. and Mrs. Average to the young things in their latest mod gear. One thousand miles from anywhere, yet all here rubbing shoulders with "Jacky" and "Tommy" whose ancestors' ancient paintings can be seen a scant few miles away in caves among the rolling hills.

Somewhere in the vicinity of 700 to



**Champion rider, Lloyd Pierce screams over a rise in the dry creek bed.**



**Russell Keen leads in the Scrambles final from Linden Schlein.**



800 spectators gather each day to watch and cheer the riders, to curse the clouds of dust and flies that blanket everything for miles.

It is a big weekend for all the station hands, tourists and locals, some traveling hundreds of miles each day to enjoy the spectacle. Machines that have been stripped, tuned and cleaned for months, riders that have been practicing patiently for these competitions all now have the chance to prove themselves. Yamaha, Bultaco, Honda, Suzuki, Norton, Triumph and many others, they are all here, screaming and revving in a desperate attempt to forge that little bit further ahead, just that little extra ounce of power or yard of steel that can prove the superiority of bike and rider.

Another added feature of the competition is the outstanding riding of the male and female sidecar team of Bob and Veroushka. Hailing from Alice Springs these two really "burnt" and one would never suspect that the tiny figure perched precariously across the bucking, swerving machine (nose sometimes inches from the truck), belonged

to a petite attractive 17 year old girl. However, anyone unsure of the couple's capabilities would only have to watch several laps of the track to appreciate that they were certainly no novices to the game, their moves and skill displaying the confidence and ruthless ability so necessary to win in this tough game.

All too soon it is Monday and the championships are drawing to a close.

We have been treated to a fine display of riding under some of the worst conditions in Australia. Despite the rock hard track, the blinding bull dust, the blazing heat and swarms of flies, some excellent times were recorded and memorable rides witnessed, that would be the talk of the motorbike fraternity through the months ahead.

Rides like Bob and Veroushka's crazy dash to win the outfit (sidecar) grudge race, (after narrowly losing the final of the main event), how Darwin's Lloyd Pierce took a clean sweep in the solo bike events (the Solo bike 3 lap in 1.03 minutes, a grade 4 on lap dashes, Solo Race 4 in 1.17 minutes, and Speedway Solo Machine race over 3 laps in .55 seconds) how the Schlein brothers (Linden and Greg) from Alice Springs rode so well in everything they entered (Solo Bike Final 3 laps third place to Gus, 201.300cc stock bike final won by Gus in 1.08 minutes, Solo Race 4 laps third place to Gus, four one lap dashes second place to Greg, in the Scrambles events 0-200cc rechargeable 5 laps won by Linden on a Yamaha in 8.12, 0-200cc 10 laps won by Linden in 15.52, 201-300cc 10 laps won by Greg in 15.09, All Star Handicap 6 laps won by Greg in 9.15, 0-200cc handicap 6 laps won by Linden in 10.00, 201-300cc 6 lap handicap second place to Greg and the Reverse Direction Handicaps over 10 laps second place to Linden). Quite an impressive record for the two young riders.

One who had the tongues really wagging was 13 year old Darwin rider Robby Kollman. Robby took a clean sweep of all the junior events and was only 8 seconds behind the best time recorded

for the 5 lap circuit by senior riders. (He bettered the time of two of the three heats by 1 second and 55 seconds respectively).

The noise begins to die, the crowds are dispersing, the dust settles on the tortured track for the last time. The sun is beginning to set behind the vast range of red ironstone hills, a brilliant orange ball it is the final curtain on the event.

The mechanized gladiators have packed their machines, the last bruises and graze have been treated.

Slowly the last riders and mechanics leave some heading for opposite ends of the vast continent, possibly not to meet again until the annual event comes around again.

The Centralian Motor Cycle Championships are over for another year.

The memories, trophies and scars will have to serve until next year!



**Exhausted rider, Russell Keen, staggers in after running second in the Scrambles final (All Star Handicap).**



**Spectator shot.**







**Stu Morley (#8), takes outside line with his suspended bike. Note the Ceriani forks on the front. Here, Stu passes Dennis "The Mouse"**

Speedway racing is alive and well in California. Traditionally the hotbed of motorcycle racing, California has capitalized on the rabid enthusiasm to revitalize a historical form of two-wheeled competition. Class A Speedway racing has returned.

**Gildehaus. Sonny Nutter, who is right behind, zaps both of them a moment later to take the win.**

Long an international favorite thanks to the intense rivalry of regional and sectional team racing, Speedway has had an on-again off-again history in the Golden West. Very popular in the Thirties, World War II stopped it in the Forties, but it returned in the Fifties—

only to be eased out by midget auto racing and, then, television. Occasional demonstration races and assorted forays to revive the sport were fruitless until the late Sixties when Class A Speedway seemed to take root in Costa Mesa, California. The impetus for the Orange County enthusiasm was started at Whitman Stadium in the San Fernando Valley, but the whole package got put together right at Costa Mesa. Since then it has been growing like a weed.

Speedway is a super quick race run on a short track. Most of the California tracks are one-fifth mile in length with heavy cushioning. Some tracks are smaller but the Class A bikes can handle nearly any length. A one-shot Ascot spectacular put the bikes on the half-mile, and the length allowed tremendous racing. In Europe, England and Australia, most of the tracks measure out to about a quarter-mile. This automatically demands more courage and skill due to the higher speeds attained. Concurrent with it is the higher risk of serious or fatal injuries.

Unlike AMA racing, the motorcycles play a supporting role in Class A Speedway events. Due to their extreme speciality, the bikes are unique and choice is limited to either Jawa/Eso or JAP on a special frame.

The JAP (for James A. Prestwich) is a 500cc fuel-burner single-cylinder engine which was first designed in the thirties. Putting out better than 50 horsepower in top tune, it dominated

**Very Popular In The '30's, Stopped In The '40's, and Returned Now, This Exciting Sport has Once Again Been Reincarnated, But It Appears To Be A More Permanent Thing As Its Popularity**

# **SPEEDWAY RACING**





Class A or International Speedway until recently. The turning point came when the Jawa people developed their bike with the Eso engine. It has taken over the sport for a variety of reasons.

The first is that the Jawa/Eso is a complete bike, whereas the JAP engine must be installed in a Speedway frame. There are a number of frame builders here and abroad, but there is a limit on their productivity. In typical English style, the JAP engines take a long time for production. Parts, as might be expected, are slow in coming and often difficult to find. There are shops that specialize in JAP engine parts, but we all know what a hang-up it is to obtain something that is limited in production and often impossible to find. But the dedicated Speedway racer would not let that stop him.

However, the JAP engine is extremely reliable. Many last the entire season without major repair; this is one of its strongest points. The Eso will do the same, but it is a little easier to get parts for the Czech bike if something does go awry.

Perhaps the biggest reason for the swing to the Eso is that the engine has a shorter stroke and will rev to 8,000 rpm. It is constructed of aluminum and lighter than the iron-barreled JAP.

The older JAP-engined bikes are good starting points for new riders, but the best riders in Division I all ride Eso-powered bikes with the exception of Larry Shaw (occasionally) and Scott Autrey (most of the time).

The bikes are utter simplicity, basic motorcycle. The tubes tie the wheels together, mount the engine and that's about it. A total loss lubrication system, the upper frame tube stores the oil, and a small tank carries the fuel. Minimal front shocks are used, but there's no rear suspension. There aren't any brakes either.

The motorcycle doesn't really look like one. The spindly front wheel and narrow tire look like pirated bicycle parts. The outrageously antique handlebars belong in a Keystone Kops movie, but they are the best for the type of riding Speedway demands.

And, to top it off, you're probably better off if you've never ridden an ordinary motorcycle when it comes to Speedway. Just about everything you've



**Rick Woods, Mike Konle (#89), and Larry Shaw, show why speedway racing is growing in popularity.**

ever learned about regular riding is forgotten in Speedway. It's a style all its own.

The riders hunch over the bars at the start. When the starting gate goes up, the power comes on instantly! If the weight isn't up front, the tremendous torque of the engines will cause a head-over-backwards loop. A quick sprint into the first turn. The idea is to get the rear wheel sideways. The rider stands on the peg and puts his left leg out for bracing. The front wheel is cranked hard to negotiate the turn, but the steering is by throttle. (The real pros can keep their left foot off the ground and on the pegs!) There you are, sideways at fifty miles an hour, and it is only then that a Speedway bike really handles. To back off is to go into



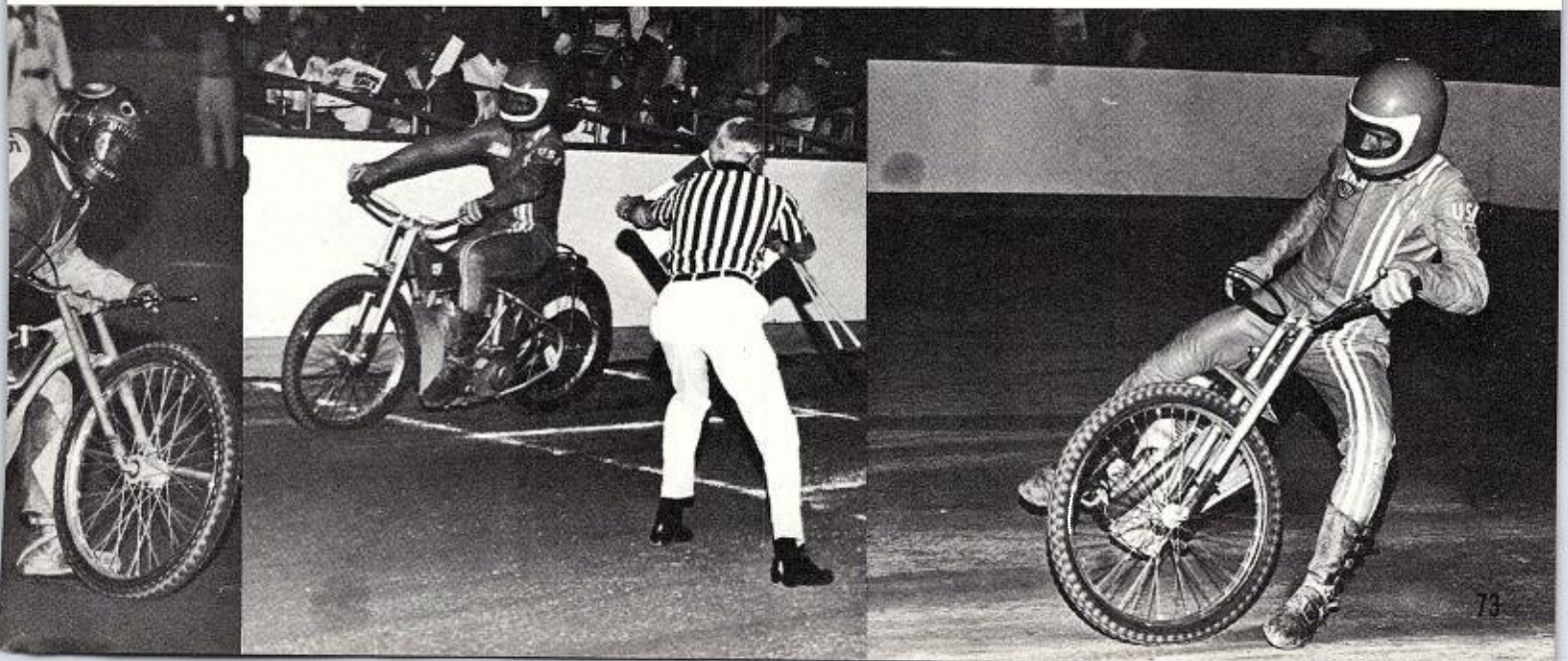
**Young Greg Haserot, veers outside as U.S. Champ, Rick Woods, takes advantage of the opportunity, and goes through on the inside.**

**Briefly In The '50's, That's The Story Of Speedway Racing.**

**t This Time**

**Is Growing Like Wildfire.**

# NG LIVES AGAIN!







**Bruce Haserot has become quite a popular rider. Note the sole of right boot. Maybe some of his fans will chip in, and at least get these re-soled if they can't buy a new pair.**

a wobble. If you're really good, the rear wheel should be in line with the front, but only a handful of riders can attain this on a regular basis and as part of their style.

Out of the turn and down the straight. Keep the weight on the rear wheel for max traction, but watch the front wheel to avoid a wheelie down the straight. Set-up for the next turn as before.

The noise is incredible and spectators are sprayed with the loosely packed earth as the rear wheels gobble it up and expel it to the stands.

This kind of action has created a new breed of rider and a new breed of fan. The fans, strangely enough, rarely venture to any other form of motorcycle racing. For a large percentage of the spectators, Speedway is the only two-wheeled competition they enjoy. Perhaps it is because Speedway distills the action into a four- or five-lap heat. There is constant excitement and racing. The events are short in length, and every foot counts. A rider is never so far ahead that he can win if he bobbles. The competition is usually too close, too tight for that to happen. The attention span for the spectator is short but intense. It's all over in two minutes or so, and then the next riders line up for their race. Compared to Speedway, a fifteen-lap main event at a half-mile track is like the 24 hours of LeMans.

The riders, many of whom having tasted the fruit of Class A will never be interested in any other type of racing, respond to Speedway like the fans. They just can't think of anything else as exciting or satisfying as Speedway racing. There are, of course, a few riders who have other ambitions. Many are motivated by money, and they have found that there is a greater potential of earnings in AMA-sponsored events. The Speedway Racing Association can't fight this problem yet. There is a \$1,000 minimum purse required for each race, and Costa Mesa provides even more than that, but there is no "outside" money involved yet. No contingency



**Jimmy Nicholzen (#128) leads Rick Woods (#2), Stu morley (#8), and "Wild" Bill Cody (#41) during a race at Costa Mesa, California. Nicholzen is definitely going to be a strong threat before long. In 1970, he had an on-again off-again season.**

prizes. No deals to spur the Speedway economy. But they'll probably come as the sport grows . . . hopefully.

A lot of the riders have a good thing going with Speedway despite the slow financial growth. Really good riders like Rick Woods, Bill Cody, Sonny Nutter, Steve or Mike Best can collect better than \$400 in a clean-sweep night at Costa Mesa.

Rick Woods is the current National Speedway Champion. He was second last year to Steve Bast, and also held

(Text continued on page 82)

## SPEEDWAY LIVES

**Trophy girls flank the former Champion, Steve Bast (left), who was number two this year. Current Cham-**

**pion, Rick Woods (center), and to the right, Mike Bast, this year's third place finisher.**

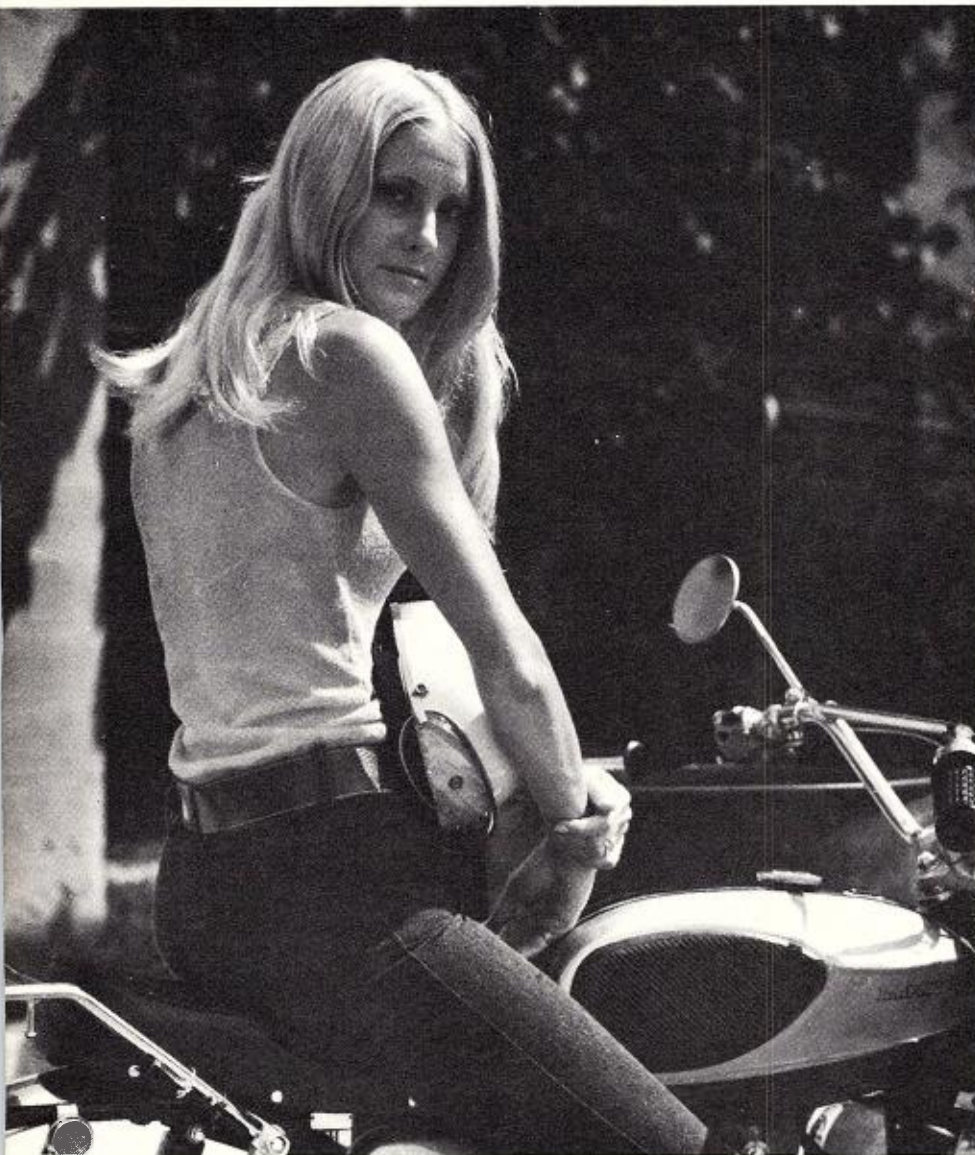




# MISS MODERN CYCLE CONTEST

Got a pretty gal and a good looking motorcycle? Put the two together in the best photo you can take and enter it in the Miss Modern Cycle competition, a regular feature in every issue.

If your photo is one of those chosen for use in the magazine, you'll receive five dollars and a one-year subscription to Modern Cycle. If you want the picture back, be sure to include a stamped, self-addressed envelope.



Shirley Long, a staff production artist with Hogan-Rose Advertising Agency in Knoxville, Tennessee, is the winner in this month's Miss Modern Cycle Contest. Bob Bolton, who sent in the winning photograph tells us that Shirley is one of three and a half members on the agency staff who enjoys the sport of motorcycling. Per Bob Bolton's request, the check for \$5 goes to Shirley Long and the one year subscription to Modern Cycle Magazine will be addressed to "The Motorcycle Types" at Hogan-Rose Advertising.

**Motorcycling your bag?**



**Then you need ours.**

HI-CAPACITY • QUALITY VINYL • WATERPROOF  
See it at your local motorcycle dealer.

**WEBCO INC.** Box 429 DEPT. MC  
Venice, Cal. 90291

**Langlitz  
Leathers**

The finest custom made leathers for the pleasure or sport rider. Factory direct only. Catalog available.

**2443 S. E. DIVISION  
PORTLAND, ORE. 97202**



FOR STREET  
COMPETITION OR ALL-OUT!

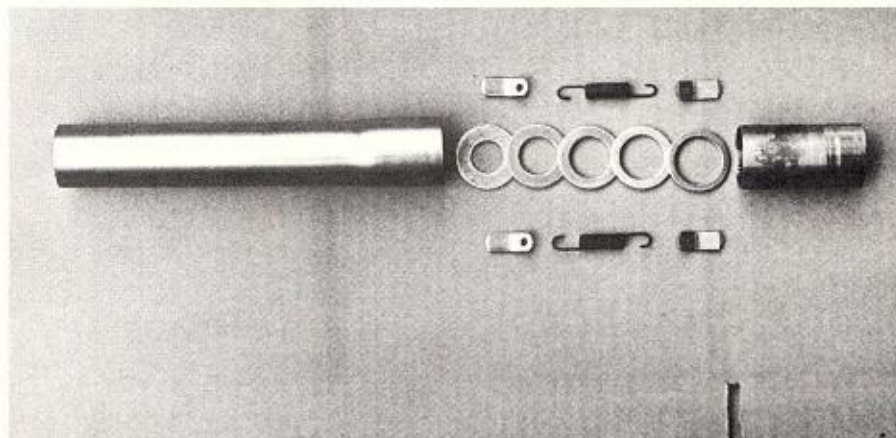
FROM MINI TO MIGHTY Powroll pumps pulsating new power into every Honda model! Reliable "bolt on" kits install just like stock parts. Complete Honda muscles catalog, \$1.25 check or m.o. Kit details for your Honda only, 50c (be sure to tell us model and year).

Bx. 926N8, Bend, Ore. 97701 **POWROLL**  
(503) 382-6395





*The five Power Disks are the heart of the Polydynamic Stinger Kit. The disks fit within the longer section of tubing, and by varying the size of disk used, maximum output can be obtained.*



# VARIABLE EXPANSION CHAMBER

In the fields of motorcycle design, engineering and construction, almost everything is a compromise on one sort or another. It's quite simple to design a device to fulfill a particular function, however, when you ask that device to fulfill more than that single function, compromise enters the picture. The common expansion chamber found on so many racing 2-strokes, is a good example of this compromise. A chamber can be designed to produce maximum revs with power high up on the scale, or it can be built to deliver good low and mid-range power. To the best of our knowledge, no one has yet devised an expansion chamber which will answer all the requirements of a 2-stroke engine.

Ideally, we suppose, the man who races a 2-stroke machine should have five or six expansion chambers so that he can tune the output of the engine to meet the demands of various race courses. Most engineers agree that the diameter of the Stinger is the key to the way in which an expansion chamber aids the engine in producing power. Large diameter Stingers produce good low and mid-range power, while smaller diameter Stingers (within limits) allow the engine to produce maximum revs and peak horsepower. Torque Engineering of Northridge, California, have just introduced a device which

seems to be the answer for the 2-stroke owner who wants to be able to "tune" his expansion chamber for maximum performance. Torque calls their new goody the "Polydynamic Stinger." It is a neat little device which allows the two-stroke owner to quickly jary the diameter of the final section of his expansion chamber.

The Polydynamic Stinger kit consists of a 2-piece Stinger assembly and a set of 5 "Power Disks" (the Power Disks resemble washers with graduated center holes). A couple of springs are included in the kit to hold the Stinger kit together when it's mounted on the machine.

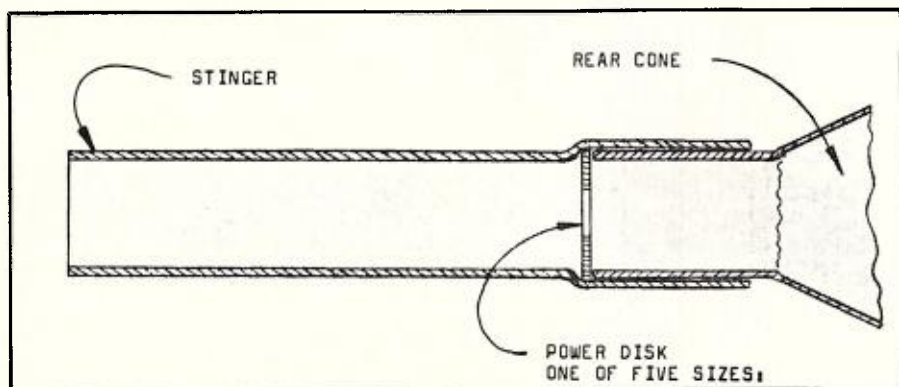
Installation is quite simple: the stock Stinger is cut off at the rear cone, and the short piece of tubing from the Stinger kit is welded in its place. Two washers are welded to the long piece of the Stinger kit and two washers are welded to the short stub. These provide the mounts for the retaining springs.

To tune the pipe for maximum performance in a given situation, start with the largest diameter Power Disk and decrease the size, one step at a time, until the pipe is tuned for optimum performance.

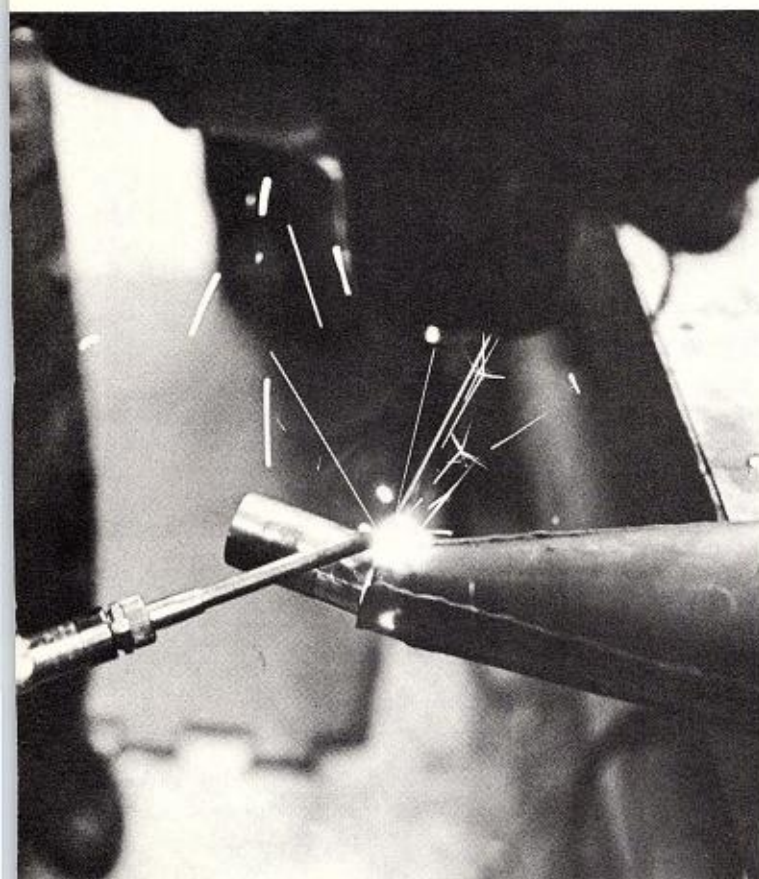
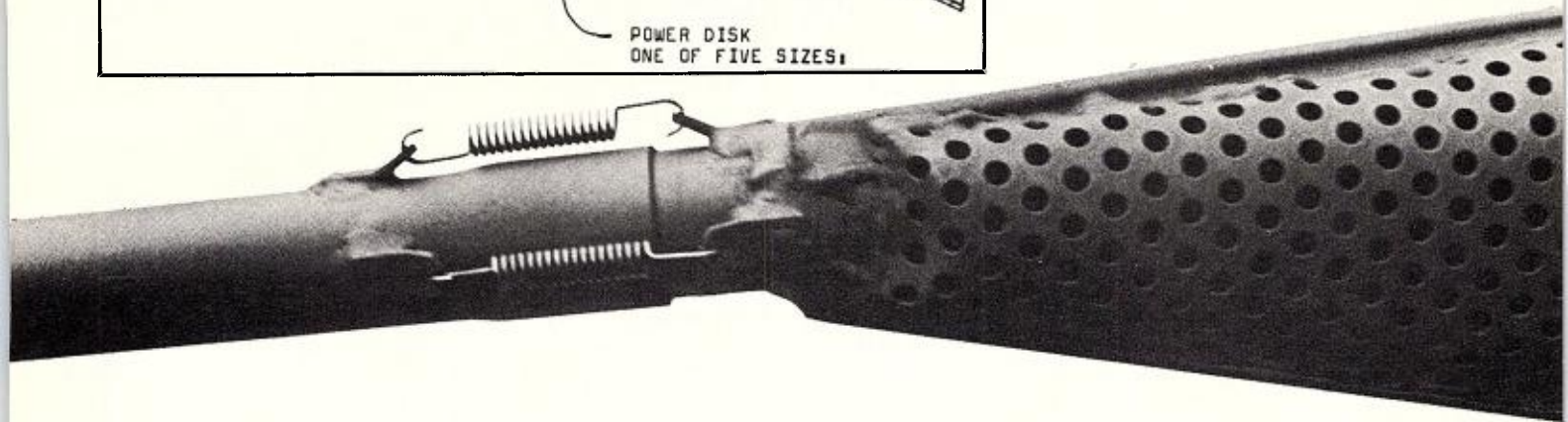
The Torque Polydynamic Stinger Kit retails for \$5.95. More information on the device can be obtained by writing to Torque Engineering Company, 18319 1/2 Parthenia St., Northridge, California 91324. •

**HERE'S AN ACCESSORY FOR  
THE RIDER WHO WANTS TO  
BE ABLE TO TUNE HIS  
EXPANSION CHAMBER TO  
SUCH A VARIETY  
OF SITUATIONS.**

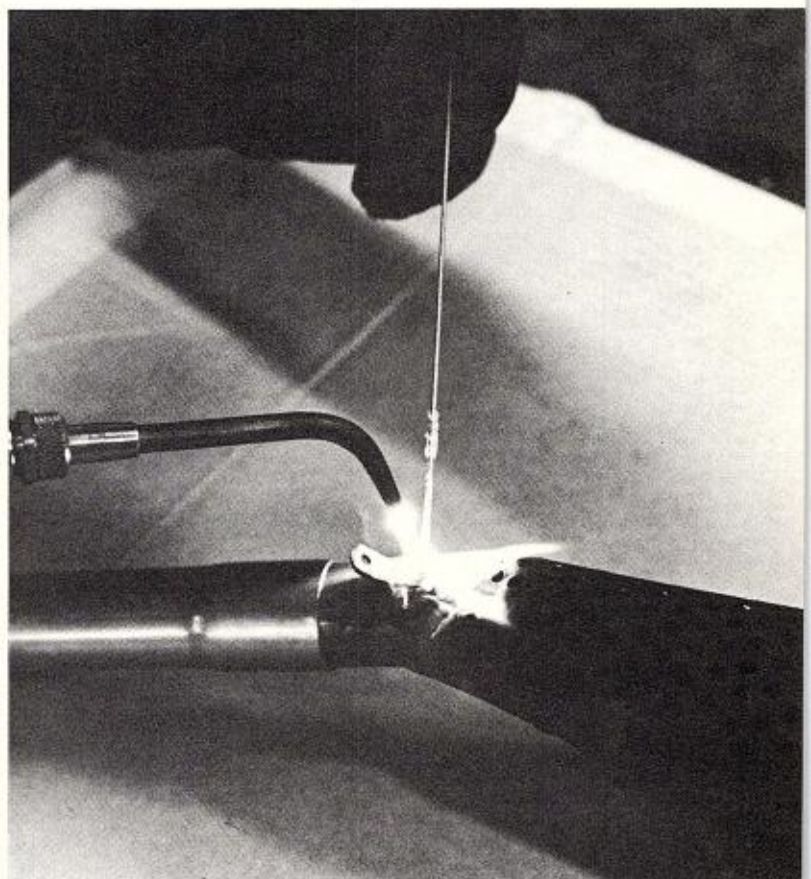




The Disk is held in position by the swedged "shoulder" in the longer section of tube. The Stinger Kit comes unpainted since the welding required to install the device would destroy the paint job. A couple of passes with a spray can of black paint will make it look like a factory installed component.



The stock Stinger is removed from the expansion chamber and the short length of tubing furnished with the kit is welded in its place. Care should be taken to insure that the complete Stinger does not stick out at an odd angle.



Four washers are welded into position as shown above to provide mounting points for the springs which hold the Stinger Kit together.



# MODERN CYCLE READER SERVICE GUIDE

The Modern Cycle Reader Service Guide makes it easy for you to acquire catalogs, brochures, or fact sheets on motorcycles or accessories. If you've had trouble in the past finding out where to write for the information you need, the Reader Service Guide is the answer to your problem. Now, all you have to do is mail a letter to Modern Cycle, and we'll do the rest. The only restrictions are: The name of the company must appear in the listing below, and you can send in only **one letter or postcard for each catalog**. We don't care if you send for ten different catalogs, as long as a **separate letter is sent for each one**. The only catalogs that are not free, are those that have a price marked after them in the listing. Mail your request for a catalog (or catalogs) to:

**MODERN CYCLE READER SERVICE,**  
(Name of dealer or distributor)  
7805 Deering Avenue  
Canoga Park, California 91304



## CLOTHING

ABC Custom Leathers .....	N/C
Endura of California .....	N/C
Hyland M.V. (Parts) .....	N/C
Kett Manufacturing Co., Ltd. ....	N/C
Langlitz Leathers .....	N/C
Racing Safety Equipment, Inc. ....	.50
Butler & Smith .....	N/C

## HELMETS

Buco Products .....	N/C
Bell-Toptex Inc. ....	N/C

## CARBURETORS

Anderson-Kittelson Distributing Co. ....	N/C
Anaheim Motorcycle Center, Inc. ....	N/C
Cosmopolitan Motors, Inc. ....	N/C
Racing Safety Equipment, Inc. ....	.50
Steen's, Inc. ....	\$1.00

## FAIRINGS & SHIELDS

Elko Manufacturing .....	N/C
Pabatco .....	N/C
Quality Accessories .....	N/C
Vetter Design Works .....	\$1.00
Butler & Smith .....	N/C

## ELECTRICAL EQUIPMENT

Anaheim Motorcycle Center, Inc. ....	N/C
Judson Research & Manufacturing Co. ..	N/C

## INSTRUMENTS

Rite Autotronics Corporation .....	N/C
VDO Instruments .....	N/C
Westberg Manufacturing Company .....	N/C

## OILS & ADDITIVES

Air-O Corporation .....	N/C
D-A Motor Oils .....	N/C
Francisco Laboratories .....	N/C
Full Bore Racing Lubricants .....	N/C
McGlaughlin Oil Company .....	N/C
Steen Lubricants .....	N/C
Sta-Lube, Inc. ....	N/C
Addzip Additives .....	N/C

## WHEELS & TIRES

B-N Supply .....	N/C
North American Imports .....	N/C
Cosmopolitan Motors, Inc. ....	N/C
Ed Kretz & Son, Inc. ....	N/C
Sammy Tanner Distributing .....	\$1.00

## TOOLS

Pabatco .....	N/C
---------------	-----

## SEATS & SADDLE BAGS

Triple A Accessories .....	N/C
----------------------------	-----

## MOTORCYCLE DISTRIBUTORS

American Honda .....	Honda
American Kawasaki Motorcycle Corp. ....	Kawasaki
Butler & Smith .....	BMW
BSA Motorcycles .....	BSA
Bultaco-American, Ltd. ....	Bultaco
Cosmopolitan Motors, Inc. ....	Benelli, Parilla
Nicholson Motors .....	Greeves
Harley-Davidson Motor Co. ....	H-D
Javco Motorcycle Corporation .....	Jawa
M-B Motorcycles .....	Moto Beta
Montesa Motors, Inc. ....	Montesa
Norton-Villiers .....	Norton
Ossa West, Inc. ....	Ossa
Pabatco .....	Hodaka
Rockford Motors, Inc. ....	Bridgestone
Sears, Roebuck & Co. ....	Sears
Steen's, Inc. ....	Taco Mini-Bikes
Triumph Motorcycles .....	Triumph
U.S. Suzuki Motor Corporation .....	Suzuki
Yamaha International Corp. ....	Yamaha

## TESTING EQUIPMENT

Rite Autotronics Corporation .....	N/C
------------------------------------	-----

## SUSPENSION

North American Imports .....	N/C
Steen's, Inc. (Ceriani) .....	N/C

## INSURANCE

Motorcycle Underwriters Insurance Co. ..	N/C
--	-----

## SPEED EQUIPMENT

California Cycle & Racing Supply .....	N/C
Drag Specialties .....	N/C
Filtron Products .....	N/C
J & R Engineering .....	N/C
Motorcycle Specialties Co. ....	.10
Powroll Performance (Honda only) .....	\$1.25
Sport Motors, Inc. ....	.25
Steve Scott Manufacturing Co. ....	N/C
Stewart's Speed & Sport .....	N/C
Wiseco Piston Company .....	N/C

## GENERAL ACCESSORIES

Accurate Accessories Company .....	.50
Anderson-Kittelson Distributing Co. ....	N/C
International Cycle House .....	.50
Rockford Motors, Inc. ....	N/C
Steen's, Inc. ....	\$1.00
Suzuki Fun Center .....	\$1.00
Triple A Accessories .....	N/C
Florida Cycle Face Shields .....	\$1.00
Butler & Smith (BMW) .....	.50

## MODELS

Pyro Plastics Corporation .....	N/C
---------------------------------	-----

## PARTS CATALOGS

Triangle Motorcycle Service .....	\$1.00
-----------------------------------	--------

## CUSTOM PAINTS

Hap Jones Distributing Company .....	\$1.00
--------------------------------------	--------

## RACKS & TRAILERS

Air-O Corporation .....	N/C
EPCO .....	N/C

## MAINTENANCE AIDS

Competition Chemicals .....	N/C
Triangle Motorcycle Service .....	\$1.00

## SPECIAL SERVICES

Harvey Owen (Foreign purchase) .....	N/C
Hyland M.V. ....	N/C

## SHOP EQUIPMENT

Great State International .....	N/C
Four Way Welder Company .....	N/C



# modern cycle PHOTO CONTEST



Hillclimb activity gets the nod as the winner in this month's Modern Cycle Action Photo Contest. Dean Robertson of Rochester, Minn. was caught "bailing out" just as his Kawasaki broke the line at the top of the climb. Both rider and machine survived in relatively unscathed condition. For sending in the winning entry this month, Dean Robertson receives a check for \$5 and a free one year subscription to Modern Cycle Magazine.

Here's your chance to win a five dollar bill plus a year's subscription to MODERN CYCLE simply by sending in a good action photo involving any two-wheeled motor vehicle. For each photo we use, we will pay you \$5.00 and a one-year subscription. Photos should be clear glossy black and white prints at least 4" x 5" in size. On a separate sheet of paper give us as much information as you can concerning the photo.  
**PHOTO CONTEST MODERN CYCLE, 7805 DEERING AVENUE, CANOGA PARK, CALIF. 91304**

**All photos used become the property of MODERN CYCLE and cannot be returned. Contributors who wish unused photos to be returned must include a stamped, addressed envelope with the entry.**

## MICHELIN

Motorcycle Tires  
and Tubes

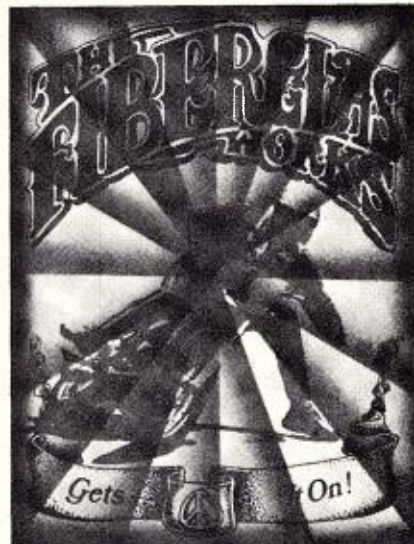


imported and distributed by

**WESTERN SCOOTER DISTRIBUTORS**

1599 Custer Avenue  
San Francisco, Ca 94124  
(415) 647-5520

Write for nearest dealer



Send \$1.00 for Catalog to:  
The Fiberglas Works  
2600 Soquel Ave.  
Santa Cruz, Calif. 95060

### DOUBLE UP WITH BINGHAM MK-I SIDECAR



Fits Most  
Motorcycles  
High Quality  
Low Cost  
Do-It-Yourself  
Kits

**From SIDE STRIDER, Inc.**

Write or Call For FREE Brochure to:

**SIDE STRIDER, INC.**  
15838 Arminia St., Unit 25, Dept. M  
Van Nuys, Calif. 91406 - Call 213/781-9908  
COMPETITION MODELS AVAILABLE

## MANUALS

Tune-ups, repairs in step-by-step pictures. Covers every bike part. A must for anyone who works on bikes.

**BIKE**

Honda	\$5	BMW	\$5	Ducati	\$4
BSA	5	Harley	5	Norton	3
Yamaha	5	Triumph	5	Royal/En.	3
					Bridgestone \$3.50

#### State Year and Model

Enduro: Guide to Woods Riding	\$5.50
Motorcycle Troubleshooting Guide	3.95
Tuning for Speed	3.50
Art of Moto Cross: Jeff Smith	3.50
Motorcycle Electrical Systems	6.95
Motorcycle Carburetion Systems	6.95

Postage-free • Free decal with each order

**MOTORSPORT EQUIPMENT CO.**  
Box 601, Groton, Mass. 01450



## HONDA ACCESSORY

Racecrafters International purveyors of all manner of goodies for the motorcycling enthusiasts, has developed a handsome accessory for the 750cc Honda Four. The new component is a highly polished, deep finned, cast aluminum cover for the contact breakers. The angle of the cooling fins is engineered to match the finning on the cylinders, resulting in a rugged, integrated appearance. Using the allen-head bolts provided, the cover can be installed in just a few minutes.

In addition to its attractive appearance, the lightweight cover provides critical crash protection for the delicate contact breaker assembly. The deep fins contribute to cooler engine operation. Price for the cover, complete with hardware, is \$12.95. Orders may be sent directly to Racecrafters International, Dept. MC, Box 347, Los Angeles, California 90028.

Numerous other accessories for Hondas and most other popular makes of motorcycles are listed in Racecrafters 300 page four-catalog package, available for \$3.00 or free with a purchase.

## K&N FILTERS

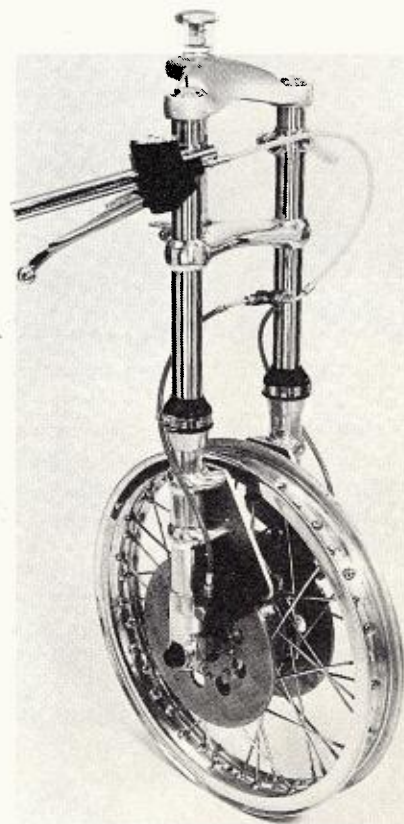
K&N Engineering of Riverside, California, has recently introduced two air filters designed for two of the most popular motorcycles from the Orient. A replacement air filter for the 360cc Kawasaki Bighorn will increase performance while the same time protecting the engine. The K&N filter utilizes a suspended-oil type of element that is washable and long lasting.

The K&N filter designed for the 60cc Yamaha Mini Enduro offers the same features found on all K&N air cleaners. K&N has a complete line of high performance air filters and filter elements for all popular motorcycles. For a complete air filter and accessory catalog, send \$1.00 to K&N Engineering, P.O. Box 1329, Dept. MC, Riverside, California 92502, or call for faster service. (714) 682-8813.



## GP SUSPENSION

From 33% to 50% greater stopping power, lighter weight and a successful history of use with works GP Racers throughout Europe highlights International Motorcycle Corporation New Lyster GP Hydraulic Double-Disc Front End Kit. Designed by Colin Lyster, I.M.I.'s Director of Engineering, the brake kit is a full expression of his knowledge as a creative metallurgical engineer, his devine taste and his craftsmanship as a master machinist. The full kit consists of: wheel hub, two calipers, an a master cylinder unit all of aluminum alloys, mild steel floating discs, Fero-da pads, 3,000 psi aircraft hydraulic tubing, spokes, 18" Borrani rim, specially fitted Lyster-Ceriani Competition Forks, aluminum mounting plates, necessary hardware and installation instructions. Previously available in very limited supply to factory racing teams, I.M.I. now has all parts of the kit in full production. Additional literature is available free to dealers on letterhead request. Writer catalog available for \$.50.





## CARLISLE TIRES

Jim Patronite, President of Azusa Engineering, Incorporated, announced that the Veteran South California Firm has been appointed distributor for the complete line of top quality Carlisle Motorcycle Tires. Both the high performance "Knobby" (shown) and the popular "Universal" tread design are available. Of course, all the Carlisle heavy-duty inner tubes and rim strips are also carried in stock.

The "Knobby" features a 100 percent nylon cord for strength, and a self cleaning tread that throws off dirt and mud giving it plenty of bite and a sure grip. For trail riding, moto cross or Hare and Hound racing, this tire is eminently suitable.

Good pavement adhesion, faster starts, quicker stops and greater safety are but a few of the added benefits built into the Carlisle "Universal" tread design. Exclusive matching on the shoulder of the tire gives added traction in the turns. Nylon cord body and exceptional construction features, offer longer mileage and greater safety.

For full information and prices, see your local Azusa Dealer or write to Azusa Engineering, Incorporated, Dept. MC, P.O. Box "N," Azusa, California 91722.



## NEW BOOTS

While the dirt rider has a wide selection of competition boots from which to select, the road rider is faced with a rather limited selection of foot ware. This situation has altered somewhat with the announcement that the Chester Boot Shop of Sterling Heights, Michigan has created a quality boot for the serious road rider. The boot, called the Merrill Marauder, offers a number of features not found in any other motorcycling boot.

Available in sizes 7-13, including half sizes, and C and E widths, the Merrill Marauder features built-in steel arches, no-scuff sharkskin shifter toes, and uppers lined with soft leather. Sewn-in aluminized heat deflectors protect the inner calves. The boots are soled with Armortred Dupon Hypalon and the heels are beveled to prevent catching.

Red and white vertical stripes add a stylish look to these quality boots. The Merrill Marauder Boots retail for \$50.00 prepaid and are available from the Chester Boot Shop, Dept. MC, 43620 Van Dyke, Sterling Heights, Michigan 48078.



## BMW FAIRINGS

Attractive and functional; two words which best describe the new model AV 70-1 Avon Fairing designed to fit the latest machines in the BMW range. The Avon AV 70-1 Fairing, available in black, white or Polaris Silver, fits the R50/5, the R60/5 and the R75/5 BMW's.

The trim lines of the new Avon Fairing, allow better penetration of the air and offer least wind resistance. The fiberglass shell is constructed of strong, resilient material with a lustrous, highly polished surface. Cut-outs in the sides of the fairing allow for cylinder cooling. Avon Fairings protect the rider from cold, dirt and water and have a high degree of impact resistance.

Avon Fairings come complete with all mounting hardware and include a chromed steel safety bar which is an integral part of the fairing.

Complete information on these Avon BMW Fairings, including prices, can be obtained by writing to Butler & Smith, Incorporated, Dept. MC, Box "H," Norwood, New Jersey 07648.



# New Products



When you think motocross —  
Think

# MAICO

Then call or write — we'll  
tell you where to get YOUR  
WINNER!

**COOPER MOTORS** 213/849-6066  
110 E. Santa Anita Ave. Burbank, Ca. 91502

**DEBENHAM IMPORTS** 312/395-3205  
887 Main St. Antioch, Ill. 60002

**EASTERN MAICO** 717/667-3987  
Royal & Duke Sts. Reedsville, Pa. 17084

## RIDER and WORKSHOP MANUALS

AJS/Matchless; Ariel; BSA; Ducati;  
Honda; Harley; Heinkel; Indian; Jawa;  
Lambretta; Norton; NSU; Pannonia;  
Puch; Royal Enfield; Sunbeam; Suzuki;  
Triumph; Velocette; Vespa; Villiers;  
Vincent; Zundapp.

Parts and accessory catalog \$1.

### TRIANGLE

2157 West Harrison Street  
Chicago, Illinois 60612

## CYCLE POLLUTED?

Try **SIMICHROME** best for alloy,  
chrome, plastic. \$1.00 per tube,  
comes in 250 gram cans, too. At  
most dealers. **BLUE AWAY** pipe  
cleaner \$1.80 per bottle. Dealers:  
Make \$\$ with these. Write:

## COMPETITION CHEMICALS

BOX 141, IOWA FALLS, IOWA 50126



## CHROME PLATING

TRY OUR FAST SERVICE  
FOR YOUR TRIPLE-CHROME  
PLATING NEEDS

### GRAVES PLATING CO.

P.O. Box 1052, Florence, Ala 35360  
Phone 205/764-9487

• Serving the Southeast Since 1945 •



**Aussie Champ, Jim Airey, finds  
room inside of former U.S. Champ  
Steve Bast .Sonny Nutter has gotten  
under Steve's younger brother, Mike  
Bast.**

## SPEEDWAY

the title in 1969. This year he'll be  
aboard two Esos owned and prepared  
by Don Edmunds to defend his crown.  
"Wild" Bill Cody scored the most points  
during the season last year, but the Na-  
tional Championship is decided on one  
night of racing. He had a spot of diffi-  
culty that evening, but will be back  
charging this year. He currently has  
four Esos which he prepares himself.

Nutter is a top favorite among the  
crowds, thanks to his colorful riding  
and Beatle-like good looks. The Bast  
Brothers ride under their own Bast  
Welding banner, and will be back in  
strength this year. Steve had a brief so-  
journ in England last season to get a  
taste of International racing. Both  
Woods and Cody have also ventured  
into the foreign domain to race against  
the "pros."

And the pros come over here, too.  
SRA has set-up an exciting Anglo-  
American Cup series towards the end  
of the season. The cream of the crop  
of Speedway show up. Three-in-a-row  
World's Champion Ivan Mauger, four-  
time World Champion Barry Briggs,  
Scottish Champ Bert Harkins, Aussie  
Champ Jim Airey and others came to  
give formidable competition to the  
young Americans. The Anglo team won,  
but not without very stiff fighting from  
the Yanks. Each year the American  
riders learn more from the seasoned  
vets and the plaintive cry "Wait till  
next year" takes on more meaning each  
season.

So Speedway is alive in California  
... and growing. There is serious talk  
of a northern California circuit between  
Sacramento, Reno, Nevada, and maybe  
Chico. If this works out, and the San  
Gabriel, Bakersville and Costa Mesa  
triangle continues this year, the future  
looks brighter for Class A racing. If it  
continues on this tack, there might be  
a swing toward involvement in other  
sections of the country, much like the  
AMA circuit.

If this happens, look out! Speedway  
racing will literally sweep the country.  
Time will tell.

**N.B.C. Motorcycles**  
IMPORT INC.

## CATALOG

The most complete retail mail order  
catalog. Numerous listings of parts  
and speed parts for: Ducati, Norton,  
Matchless, A.J.S., Zundapp. Many  
accessories for practically any mo-  
torcycle Send 75¢ to: **N.B.C. Motor-  
cycles Import Inc.**, 15, Mount Vernon  
St., Ridgefield Park, N.J. 07660,  
Telephone: 201-487-1911

## CUSTOMIZE...with TURN SIGNALS

"Do it yourself"...it's easy  
ACCESSORIES CATALOG 354

Houston Products DEPT. NC  
LOCKPORT, ILL. 60441



**Handles  
Better**

TRY ONE TODAY!

## GIVE... so more will live HEART FUND



# Cancer is sneaky.

It doesn't announce itself  
loud and clear until it's often  
too late. Beat it at its own  
game. Yearly visits to your  
doctor are cancer's worst  
enemy. Help yourself with a  
checkup. And others with a  
check.

**American Cancer Society**

## LANCER LEATHERS

CUSTOM FITTED LEATHERS  
FOR STREET OR TRACK  
SATISFACTION GUARANTEED  
SEND FOR FREE BROCHURE  
1511 W. HATCHER RD. DEPT 5  
PHOENIX, ARIZONA 85021





**MOTORCYCLE  
SPORT AND  
THE MEN WHO  
RIDE ON  
ANY  
SUNDAY**

**A FILM BY BRUCE BROWN**



**COMING THIS SUMMER TO A THEATER NEAR YOU**

**World Premier June 30th, Plaza Theater Westwood, Los Angeles.**





## Benelli! At Penneys everyday prices. Now you don't have to daydream about cycling down the open road.

The highway stretches out before you. You pull on your helmet, adjusting your face shield. You twist the handlebar accelerator of your Benelli motorcycle... and then you wake up. Beautiful daydream, wasn't it? Well, stop dreaming and start cycling. Because Penneys has the Benelli trail or highway bike for you. Penneys also services Benelli motorcycles, and carries a stock of spare parts, in case any problems crop up to spoil that dream of yours.

The Volcano. 180cc.  
69mph maximum speed. **508<sup>00</sup> every day**



The Cougar. 65cc. 58mph  
maximum speed. **414<sup>00</sup> every day**



The Hurricane.  
65cc. 40mph maximum speed. **299<sup>00</sup> every day**



The Dynamo Trail.  
65cc. 54mph maximum speed. **370<sup>00</sup> every day**



*Check local laws about licensing these vehicles.  
Always wear a helmet when you ride.*

**Penneys**  
auto center

**The values are here every day.**

For the address of the Penneys Auto Center nearest you, write to: AF/x Racing Team, 1301 Avenue of the Americas, New York, N.Y. 10019